REPO

OF THE

INDIAN FACTORY LABOU

COMMISSION, 1908.

(1982)

VOLUME I.—REPORT AND APPENDICES.

Presented to both Houses of Parliament by Command of His Majesty.

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REPORT.

Section I.—*Introductory.*

1. The terms of the reference to the Commission are contained in the Resolution of the Government of India in the Commerce and Industry Department No. 8605—8631-32, dated the 10th October 1907, which is reproduced below :—

Terms of reference.

"In the Resolution in this Department No. 9974—9993-13, dated the 17th December 1906, it was announced that the Government of India, acting on a suggestion made by the Secretary of State for India, had decided to appoint a Committee to enquire into the conditions of factory labour in textile factories in India. It was stated that the Committee's enquiries would be of a preliminary character only; and a promise was given that, should their report establish the existence of abuses which required to be remedied, a representative Commission would be appointed to examine the whole subject comprehensively before any radical changes were made in the existing factory law.

(2) The report of Sir Hamilton Freer-Smith's Committee was published in the *Gazette of India* on the 1st June last. The Committee was of opinion that several alterations in the present law were necessary.

(3) The Secretary of State has now agreed to the appointment of a Commission to investigate, in respect of all factories in India, the questions referred to Sir Hamilton Freer-Smith's Committee, and the various suggestions and recommendations which that Committee has made.

The Commission will consist of :—

President :

The Hon'ble Mr. W. T. Morison, I.C.S., Officiating Member of Council, Bombay.

Members :

Mr. W. A. B. Peaumont, Superintending Inspector of Factories, England.

Mr. S. M. Chitnavis, B.A., S.C.S., Deputy Commissioner, Central Provinces.

Lieutenant-Colonel C. Mactaggart, M.A., M.B., I.M.S., Inspector-General of Prisons, United Provinces.

The Hon'ble Mr. Alexander McRobert, nominated by the Upper India Chamber of Commerce.

Dr. T. M. Nair, Municipal Commissioner, Madras.

Mr. John Nicoll, nominated by the Bengal Chamber of Commerce.

The Hon'ble Mr. Vithaldas Damodher Thackersey, nominated jointly by the Bombay Chamber of Commerce and the Bombay Millowners' Association.

SECRETARY:

Mr. J. Campbell, I.C.S., Under Secretary to the Government of India, Department of Commerce and Industry.

The Commission will assemble at Bombay on the 1st November. They will remain on tour until about the 15th April, and the Government of India hope that the enquiry may be completed, and the report submitted, by about the end of May."

Preliminary procedure.

2. The Commission assembled in Bombay on the 1st November 1907, and the question of the procedure to be adopted in the conduct of the enquiry was at once taken up. It was decided to prepare a general statement giving, in as succinct and definite a form as possible, the main points referred to the Commission, and to supplement this by a series of questions addressed (*a*) to factory-owners, agents, and managers generally; (*b*) to factory-owners, agents, and managers of ginning mills and presses; (*c*) to representatives of the various Local Governments; (*d*) to medical witnesses; and (*e*) to general witnesses. The summary containing the main terms of the reference to the Commission, and the series of questions prepared, are reproduced as Appendix A. It was also decided to address every recognized commercial association in India interested in factory legislation, and to request them to nominate representative witnesses who would give written replies to the questions framed, and who would also appear before the Commission for oral examination. The Bombay Chamber of Commerce, the Bombay Millowners' Association, the Ahmedabad Millowners' Association, the Upper India Chamber of Commerce, the Bengal Chamber of Commerce, the Bengal National Chamber of Commerce, the Indian Jute Mills Association, the Narainganj Chamber of Commerce, the Rangoon Chamber of Commerce, the Madras Chamber of Commerce, the Panjab Chamber of Commerce, and the Delhi Millowners' Association were addressed in this sense; and all the witnesses nominated by these bodies were given an opportunity of appearing before the Commission. In addition, the District Magistrate or other local authority in each important industrial centre was addressed, and was asked to nominate witnesses; and the chief executive and medical officers of each centre visited were invited to give evidence. When these preliminaries had been concluded, the various Local Governments were supplied, where that was practicable, with lists showing the witnesses nominated by officers or by commercial associations within their jurisdiction; and they were requested to furnish the names of any other gentlemen who should, in their opinion, be examined by the Commission. The Local Governments were also asked to nominate a representative or representatives to give evidence on their behalf, it being explained that the evidence so tendered would not be regarded either as a complete or final presentment of the Local Government's views on the various questions dealt with. In addition to the lists of witnesses compiled from these sources, a considerable number of witnesses were also summoned by us from time to time in the course of the tour, on our own initiative; and the fullest opportunities were given to all persons desirous of giving evidence to appear and state their views.

The mill hands have nowhere in India any representative body, and in most cases individuals were afraid to come forward and give evidence which might bring down on them the displeasure of their employers. The only way to ascertain their views was to question them informally either at their mills or in their homes, and this course was adopted on several occasions. The President, with one or more members of the Commission, visited the houses of the operatives in Bombay, Ahmedabad, Calcutta, Cawnpore, and Delhi, and questioned as many operatives as could be got together on each occasion; the substance of the statements made will be found either among the recorded evidence, or in the inspection notes.

3. The written replies, when received, were edited to the extent necessary to make them suitable for inclusion in the record of evidence; but in all cases the wording adopted by the witness was retained as far as possible. A few references to purely irrelevant matters, *e.g.*, the cotton excise duties, were omitted. If the witness appeared for oral examination, a record of the proceedings was taken in shorthand, and from that record an abstract was prepared, giving the substance of the evidence. The abstract was then forwarded in print to the witness, who was requested to amplify or amend it, if he considered it either inadequate or inaccurate. The oral evidence, as finally accepted, has been printed in continuation of the written evidence of each witness, where written evidence was tendered.

4. Our tour was arranged in such a manner that no important industrial centre remained unvisited. The first seven days of November were devoted to preliminary work; Ahmedabad was visited from the 8th to the 14th; we inspected the mills at Broach on the 15th; and, returning to Bombay on the 16th November, remained there till the 19th December. Our next centre was Jalgaon, where we remained from the 20th to the 23rd. Meeting again at Agra on the 3rd January, five days were occupied in work there, and at Aligarh and Hathras; seven days were then spent at Cawnpore, and three at Lucknow. We arrived at Calcutta on the 19th January, and remained there till the 11th February, when a short visit was paid to Dacca and Naraingan j. Passing again through Calcutta on the 16th, Moulmein was reached on the 19th February. Three days were occupied in work there, and four at Rangoon. We left Rangoon on the 28th February, arriving on the 3rd of March at Madras, where we spent a week. As it was considered advisable to obtain information regarding the working of the mills in the southern districts of Madras, and as time did not admit of the Commission, as a whole, proceeding there, it was decided to depute the Hon'ble Mr. McRobert and Mr. Nicoll to visit the Tinnevelly, Trichinopoly, and Madura districts. These members left the other Commissioners at Madras, rejoining them at Amraoti on the 19th March. The main body of the Commission, in the meantime, inspected the mills at Sholapur, Akola, Amraoti, and Badnera. Leaving Amraoti on the 20th March, Pulgaon and Wardha were visited on that day; the mills at Hinganghat were inspected on the 21st; and on the same day Nagpur

was reached, where we remained until the 26th March. Nine days were then spent in Delhi, two at Amritsar, one at Dhariwal, and three at Lahore. On the 11th April we left Lahore for Simla.

Resignation of Lieutenant-Colonel Mactaggart.

5. Lieutenant-Colonel Mactaggart was, owing to illness, prevented from accompanying us after the conclusion of the work at Jalgaon, and he was eventually obliged, for the same reason, to resign his appointment on the Commission. We desire to take this opportunity of expressing our regret that he should have been compelled by ill-health to abandon the work in which his advice and co-operation were so valuable. At the request of the President, Lieutenant-Colonel Mactaggart has prepared a note dealing with certain of the main points referred to the Commission; the limitations subject to which his opinions are expressed are clearly stated in the note itself, which has been printed as an appendix to this report (Appendix B). Within these limitations we attach great weight to his views regarding the physique of the mill-hands in the Bombay Presidency, based as they are on close observation throughout our tour in that Presidency, and on previous wide experience in examining the physique of large bodies of men in India.

SECTION II.—*The inspection work of the Commission.*

Inspection work: importance of the record prepared.

6. At a very early stage in the course of the enquiry, it became evident that we should have to depend primarily upon our own inspections for accurate information as to the actual conditions prevailing in the factories. The evidence obtainable on this subject was in several cases contradictory, inconsistent and indefinite; and information was sometimes given, in good faith, which careful investigation proved to be erroneous or misleading. The absence of any comprehensive and accurate record dealing with the conditions prevailing in the various factories throughout India, and the necessity for such a compilation as the basis of any discussions of a practical character regarding factory legislation, emphasized the importance of this branch of our work. Every effort has been made to render the record of the inspections made by us thoroughly accurate. In connection with this question, we would point out that the composition of the Commission was such as to afford exceptional opportunities for verifying statements made as to the hours of work, and the conditions of labour, by enquiries from the operatives themselves; and the ability to question the workers in their own languages enabled us, on several occasions, to prove the existence of abuses which it would otherwise have been difficult or impossible to detect.

7. We take this opportunity of acknowledging the courtesy with which we were received by owners, agents, managers, and other factory officials throughout the whole of our tour; in practically all cases every facility was offered for the inspection of the works and the operatives; all requests for information were readily and promptly complied with, even where these involved the expenditure of considerable time and

labour; and in five cases the work of the factory was stopped, and the whole of the male operatives were mustered outside, in order that we might have a favourable opportunity of judging as to their general physical condition. It is entirely owing to the courtesy and co-operation of factory-owners and managers that we have been enabled to prepare so full a record of the conditions at present obtaining in factories in India; and we trust that the information collected will prove useful not only to the Government, but also to those engaged in industrial work in this country. We attach the greatest importance to this record, as it provides a mass of relevant and thoroughly verified facts which must, we consider, form the basis of all proposals of a practical character which may be put forward for the amendment of the existing law: no such material has hitherto been available. The inspection notes are printed as an appendix to this report (Appendix F).

SECTION III.—*General principles adopted by us in framing our recommendations.*

General principles adopted in framing recommendations.

8. The recommendations which we have decided to make as regards the amendment and amplification of the existing law governing the working of factories in India are based solely upon the experience which we have acquired, by actual observation, of the defects in the working of the present Act, and upon our opinions, based upon that experience, as to the practicability of the remedial measures we propose. We desire to make it clear that we have proposed no alterations in, or additions to, the present law solely upon theoretical grounds; in all cases where we recommend any alteration, our recommendation is based upon the conviction that the change is necessary; in all cases where we recommend a new procedure, we are satisfied that the new procedure is not only necessary, but also practically feasible. In framing our recommendations, we have also been guided throughout by the consideration that the welfare of India—of Indian operatives and of Indian industries—must be regarded as absolutely paramount. All of us, with the exception of Mr. Beaumont, have had many years' experience in India; we are profoundly impressed with the necessity for taking all practicable measures to foster the development of Indian industries, and convinced of the dangers likely to result from any attempt to apply to India laws or regulations framed with reference to other, and different, conditions from those obtaining in this country. In particular we would strongly deprecate as most injurious any attempt to apply the laws and regulations governing factory labour in the United Kingdom, *as such*, to India; or to secure any definite relation between the labour laws of England and of India. Any such course must, we are satisfied, be fraught with the gravest danger to this country; and we consider that our experience warrants us in placing upon record a positive and unqualified opinion to the effect that the labour conditions in India are not in any way comparable with those existing in the United Kingdom. Mr. Beaumont, who has had thirty-seven years'

experience of factories in England, entirely concurs in these views; and if further confirmation were required it is supplied by the experience which the other European members of the Commission possess as regards factory operatives, factory life, and labour conditions generally in England and in India.

SECTION IV.—*Hours at present worked in Indian factories.*

Definition of "excessive hours" and "working hours."

9. It will simplify the discussion of this subject if we state that, throughout the report, we have as a matter of convenience adopted the expressions "long hours" or "excessive hours" to denote cases where operatives have been actually worked, in any one day, for a period exceeding 12 hours. The expression "working hours" or "hours worked" will, unless the contrary appears from the context, be applied to the period for which the operative remained on duty, after deducting all intervals of rest of a definitely ascertained character. For example, an operative who worked from 5 A.M. to 8 P.M., with the legal interval of half an hour at noon, would be said to work "excessive hours"; and the "hours worked" would be 14½, even though as a matter of fact the worker had, over and above the ascertained interval, spent one or two hours during the day in the mill compound, eating his food, smoking or loitering.

General statement as to the hours of work.

10. Our enquiries prove that excessive hours are not worked, save on very rare occasions, except in textile factories, and in certain seasonal factories where work is carried on at high pressure for a comparatively short period. In textile factories, excessive hours are frequently worked in cotton mills; in all jute mills weavers are employed for excessive hours, while operatives in the preparing and spinning departments do not, except in a few unimportant cases, work long hours.

Hours of work in textile factories.

11. The following summary of hours in textile factories gives the main facts ascertained during the course of our investigation; more detailed and definite statements as to working hours will be found in the inspection notes, or, in certain cases, in the printed evidence. As a matter of convenience, and in order to make the summary more lucid, we shall restrict it to the case of adult male operatives only, and shall deal separately with each of the more important centres visited.

Ahmedabad.

Only a few of the mills are equipped with electric light; and, except in two or three, work is restricted to daylight hours. The average for the whole year is approximately 12 hours and 7 minutes' actual working time: in the longest days the operatives come to the mills about 5-30 A.M., and leave at 7-30 P.M., giving 13½ hours' working time; the shortest working day is approximately 11 hours. In one of the mills

fitted with electric light the average working time throughout the year is 13 hours 22 minutes; and the longest day was one of 14¾ hours. Throughout the year, the operatives in this mill were frequently worked for over 14 hours a day.

Bombay.

Out of a total of 85 cotton mills in Bombay island, 60 are fitted with electric light installations, and the hours worked in these mills are, in general, excessive. In 1905, when electric light was introduced for the first time in a considerable number of the mills, and when the China and home markets were in a particularly favourable condition, the hours worked in the mills fitted with electric light were, as a rule, from 5 A.M. to 8 P.M.—giving 14½ hours of actual work. In some cases the mills worked from 5 A.M. to 8-35 P.M., or over 15 hours' actual work. After these hours had continued for some months, the matter began to attract a considerable amount of attention; and the Bombay Millowners' Association, at a meeting held in August 1905, passed a resolution in favour of an average 12 hours' day. It was found impossible to secure the general observance of that resolution, however, partly owing to the disinclination of individual millowners to abide by the decision of the Association, and partly owing to the attitude adopted by the employés in several mills when they found that a reduction in the working hours led to a corresponding diminution of their wages. These operatives wished to revert again to the long hour system, and brought pressure on the owners in order to secure this. The position was further complicated by the fact that, while many of the workers were undoubtedly in favour of the long hour day, a very large number were strongly opposed to it. Mills working daylight hours, or an average 12-hour day, found in some cases that their best workers were leaving in order to take advantage of the longer working day in other mills; and in self-defence they, in several cases, adopted a 13-hour or 13½-hour day. Matters ultimately adjusted themselves; and practically all the mills now adopt one or other of the two following systems—they either work daylight hours, irrespective of the question whether they have or have not electric light installations, or they work an average 13 or 13½-hour day all the year round. It is important to note that the Millowners' Association was powerless to enforce its resolution in favour of a 12-hour day, as against the individual members of the Association; and it is clear from the evidence given before us that no reliance can be placed upon any voluntary combination among millowners which has as its object the regulation of working hours, if the system proposed does not suit the convenience—pecuniary and otherwise—of the individual proprietors. It is also noteworthy that, although a large body of the workers were opposed to the system in force in 1905, that system continued in operation for some months without protest on their part.

It will tend to a clearer appreciation of the present position if the actual working hours of the two classes of mills are now stated in somewhat greater detail. The mills fitted with electric light generally begin work about 5-30 A.M., and continue, with the usual half hour's interval about noon, to 7 P.M. A few mills begin work about 5-40 A.M.,

working till 7-15 or even 7-30 P.M.; in one or two others the hours are from 6 A.M. to 8 P.M.—giving 13½ hours' actual work all the year round. In certain mills fitted with electric light it is customary to begin work half an hour later in the cold weather—*i.e.*, about 6 A.M.—without postponing the stopping time to a corresponding extent; in such cases the cold weather day averages about 13 hours, while the hot weather day approximates to 13½ hours of actual work. The mills working daylight hours begin about a quarter of an hour before sunrise, and stop about a quarter of an hour after sunset; the average working time, over the whole year, is approximately 12 hours and 8 minutes; the shortest working day is about 11 hours 10 minutes, from 6-55 A.M. to 6-35 P.M.; and the longest from 5-48 A.M. to 7-33 P.M.—giving 13¼ hours' actual working time.

Broach.

One mill works by daylight only, the longest working day being 13 hours 40 minutes in June and the shortest 11 hours 15 minutes in January. The other mill, which is fitted with electric light, generally works from daylight to 7-45 P.M., occasionally to 8-30 P.M. As the mill can begin work at 5-30 A.M. in the hot weather, this means 14½ working hours occasionally.

Agra.

The working hours are from daylight to 9 P.M., and this system has been in force since the opening of the mills—in one case for about 20 years. The longest day is from 5-15 A.M. to 9 P.M., giving 15¼ actual working hours. The shortest day—in December and January—is from 6-45 A.M. to 9 P.M., representing 13¾ actual working hours.

Hathras.

The working hours are from dawn to 8 P.M.; that is, the hours worked here are only one hour shorter than in Agra.

Cawnpore.

Two of the cotton mills work a 12-hour day, having been convinced by experience that they obtain better results under that system than by working longer hours. The other cotton mills work daylight hours in the hot weather, and up to 8 P.M., with electric light, in the cold weather: the average is about 13 hours daily. The woollen mill works, on an average, 10 hours and 20 minutes only, the actual hours varying from 11¾ in the hot weather to 9½ in the cold weather.

Lucknow.

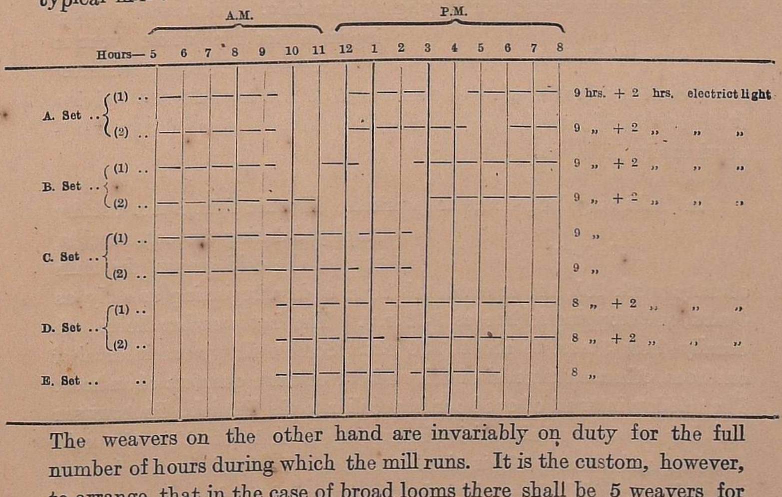
The actual working day is 13¾ hours.

Calcutta.

The system of working varies in each *cotton* mill inspected. Speaking generally, the tendency is to have a late start, and to work the mill continuously, from start to finish, without giving the half-hour interval prescribed by law. One mill works a 10-hour day only, from 8 A.M. to 6 P.M.; another works the spinning department for 12 hours continuously from 7-30 A.M. to 7-30 P.M., the weavers working from 6 A.M. to 7-30 P.M.; a third mill works daylight hours only, without the

midday interval; a fourth works from 8 A.M. to 8-30 P.M., also without an interval; and a fifth from 5 A.M. to 8 P.M., with an interval of 2 hours in the middle of the day. In the cotton mills of Bengal, as in the jute mills there, the hours of work are largely determined by the fact that, where Bengali workmen are employed, an interval of at least one and a half hours, and preferably two hours, must be given in order to enable them to cook their food. Differing in this respect from the operatives in other textile centres, they will not eat cooked food brought to the mill.

The *jute* mills are worked upon a system peculiar to Calcutta, and somewhat difficult to explain in detail. All the mills work, nominally, from 5 A.M. to 8 P.M. without stoppage; but it is admitted that in certain mills constant endeavours are made, when the conditions of the labour market permit of this, to "crib time," and in such cases the factory may run from 4-30 A.M. to 8-30 P.M. The workers, except in the weaving and sewing departments, are divided into a number of shifts, the hours of work of each shift being arranged so that each worker has an interval of at least two hours—or else is entirely free—at the time when he takes his principal meal. Where no long interval is given—*i.e.*, where the worker eats his food before beginning work, or after finishing it—each operative has a rest interval of half an hour or so during the term of his shift. The shifts are so arranged that no operative works more than 11 hours a day. We ascertained by careful inquiry that these shifts, though complicated at first sight, are understood by the operatives and are actually carried out. The system will be comprehended from the diagram appended, showing the hours of work for all the adult shifts, in departments other than weaving and sewing, of a typical mill :—



The weavers on the other hand are invariably on duty for the full number of hours during which the mill runs. It is the custom, however, to arrange that in the case of broad looms there shall be 5 weavers for each set of 4 looms; the extra hand is in some cases engaged by the mill, in others he is engaged by the 4 weavers themselves, who pay him a monthly wage, and take from the mill the usual piece-work rate for his production. With narrow looms the 4 men on 4 adjoining looms

form themselves into a set, and arrange times of relief among themselves. The weavers must, however, all be present at the opening and closing of the mill; and they are therefore on duty ordinarily for 15 hours a day, or where "time-cribbing" is resorted to, their actual employment may extend to 16 hours a day. No regular midday interval is given in any of the jute mills, and the machinery is never stopped between the starting and closing times.

Madras Town.

Daylight hours only are worked, but the full period of daylight is not utilized in all cases. The usual hours are from 6 A.M. to 6 P.M. in the cold season; and from 5-30 A.M. to 7 P.M. in the hot weather. The two largest mills work, on an average, about 11 hours a day only throughout the year; their longest day does not exceed 11½ hours.

Madras Presidency.

All the mills inspected work daylight hours only, the longest day being from 5-45 A.M. to 6-45 P.M., and the shortest from 6 A.M. to 6 P.M. In no case do the longest hours exceed 12½, and generally the hot weather day does not exceed 12 hours.

Sholapur.

The hours are from dawn to 7-30 P.M., or from 6 A.M., fixed, to 7-30 P.M. In the former case the working hours average about 12½ for the shortest days, and 13½ for the hot weather months. A few years ago, about 1898, two of the mills worked very long hours—from 5 A.M. to 8 P.M., sometimes to 9 P.M., giving in the latter case 15½ hours of actual work.

The Central Provinces.

All the mills visited work daylight hours only. The average working time for the whole year is approximately 12 hours 3 minutes and the longest day in any mill was from 5-25 A.M. to 7-20 P.M.—giving 13 hours 25 minutes' actual work. The shortest working day is approximately 11 hours.

The Punjab.

In Delhi very long hours are worked. Electric light is not usually employed during the hot weather, but in the cold season the mills actually work 13½, 14, or even 14½ hours a day, beginning as early as 6 A.M., and stopping as late as 9-30 P.M. The hot weather hours are usually from 5 A.M. to about 7-30 P.M. Some mills give an interval of one hour, others an interval of half an hour or three quarters of an hour. The midday interval of one hour is peculiar to the Punjab. In Amritsar and Lahore the actual working hours vary from 11½ to 13 in the cold weather, and average 13¾ in the hot season. In Amritsar the longest interval over which the working hours are spread is from 5-10 A.M. to 7-30 P.M.; in Lahore one mill works similar hours, but the other occasionally works up to 9 P.M., and has an average 13-hour actual working day throughout the cold season. The Dhariwal Woollen Mill works, on an average, only 9½ hours (actual) in winter, and 11½ hours in the hot weather.

12. To recapitulate, in mills working *daylight hours* the average working time for the whole year is approximately 12 hours and 5 minutes; the longest day does not usually exceed $13\frac{1}{2}$ hours' actual work, and the shortest day is about 11 hours.

Summary of the preceding paragraph.

In the mills fitted with *electric light* in Bombay island, the hours worked vary from 13 to $13\frac{1}{2}$ a day; in Ahmedabad similar hours are worked, the tendency being to prolong the time if possible, and in one mill which we visited the operatives are sometimes worked for over 14 hours a day. A case where the hours were extended to $14\frac{3}{4}$ is on record. In Broach work occasionally goes on up to $14\frac{1}{2}$ hours a day. The Agra hours are from $13\frac{3}{4}$ as a minimum to $15\frac{1}{4}$ as a maximum; in Hathras they are only one hour less. In Lucknow the actual working day is $13\frac{3}{4}$ hours. In the Calcutta jute mills the weavers are on duty for 15 hours, and this is, in some cases, extended to $15\frac{1}{2}$ or 16 hours. In Sholapur the hours range from $12\frac{1}{2}$ to $13\frac{1}{2}$; in Delhi they are from $13\frac{1}{2}$ to $14\frac{1}{2}$ a day. In Amritsar and Lahore the hours average $13\frac{3}{4}$ in the hot season, and in some cases amount to 13 hours throughout the cold weather. These are the conditions which prevail at present. But formerly the Bombay mills fitted with electric light regularly worked from 5 A.M. to 8 P.M., or $14\frac{1}{2}$ actual working hours, this being, in some cases extended to 15 actual working hours. Similarly in Sholapur the mills were on occasion run for $15\frac{1}{2}$ actual working hours. It is to be remembered that, in all these cases, the mills were not worked on the shift system.

13. The only seasonal factories where excessive hours are worked are ginning and rice mills. In the former class there is in general very inadequate supervision; the arrangements are usually of a primitive character; and it is not infrequently the custom to leave the provision of the labour force, which consists chiefly of women, entirely in the hands of contractors, who are paid so much *per* unit of cotton ginned. Speaking generally, it may be said that gins usually work for about 12 hours with one set of hands, or for 24 hours with a double shift. At times, the frequency of which depends upon the cotton crop and the popularity of the particular factory, cotton is received for ginning in excess of the quantity which could be ginned in 12 hours, and not sufficient in amount to justify day and night working. In such cases the gins are usually worked for periods up to 15, and in rare cases 18, hours, with one set of hands; but a certain number of additional workers are generally engaged, so that the operatives can have periodical intervals of rest. The practice in this respect varies from place to place; where the gins are under the Act, as in Khandesh, the number of extra hands engaged is always sufficient to bring down the number of hours which each operative must work—assuming that they avail themselves fully of the relief facilities provided—to the number of hours permissible under the Act, or more usually to less than that number. In other centres the number of extra hands employed is not accurately calculated; and the hours actually worked by the women may be greatly in excess of

Hours of work in seasonal factories.

11 hours. In factories not under the Act it is a common practice to work women nominally for as long as 18 hours, allowing them to make their own arrangements for relief by other members of their families. The period of high pressure probably does not extend beyond a month, or a month and a half at the most.

In the rice mills, for reasons identical with those explained above as regards gins, working is also spasmodic in character at certain periods of the year. The mills usually work for about half the year only; out of the six months' season, a mill will probably work from 6 A.M. to 6 P.M. for about 3½ months; from 6 A.M. to 10 P.M., with one set of hands—or in some cases with two shifts—for about one month; and all day and night, with double shifts, for the remaining period of 1½ months. As it is the custom in Burma to give each worker an interval of an hour and a half during the course of the day, and, when working late, a second interval of half-an-hour about 6 P.M., an operative in a rice mill working with a single set of hands for the intermediate 16-hour period would be required to do 14 hours' actual work a day, for about one month or so in each year.

SECTION V.—*Extent to which the present Act is either ignored, or not strictly enforced.*

14. Having stated the results of our observations as to the excessive hours worked in certain factories, we shall now explain the more salient points in respect of which the present law is either ignored, or not strictly enforced. Our inspections have revealed the fact that in some provinces the law is systematically ignored to an extent not hitherto imagined, and it is necessary to set forth in some detail the irregularities and abuses which we have found to exist. It will be convenient to discuss this matter separately in so far as it affects adult males, women, and children, respectively.

Extent to which the present Act is ignored, or not strictly enforced, in the case of adult males.

15. The only restrictions which the Act imposes on the employment of adult males relate to the compulsory half-hour interval in the middle of the day, and the grant of a holiday on Sundays. The law prescribing half an hour's interval in the middle of the day is not observed in the Calcutta jute mills, in so far as the weavers are concerned; it is not observed in the cotton mills there; and it is generally disregarded in rice mills, ginning factories, presses and flour mills throughout India. In rice mills the operatives have, as a general rule, an interval of one-and-a-half hours at times suited to the convenience of each; but no definite fixed interval is given, and there is no general cessation of work. In ginning factories male labour is not employed to any large extent; but, whatever class of operatives are engaged, there is seldom a regular interval during which the gin stops. The usual practice is to run the machinery continuously until a stoppage becomes necessary for mechanical reasons, but it is customary to entertain a sufficient number of additional hands to permit

of the workers, whether male or female, obtaining intervals of rest at odd times during the course of the day. In presses the work is usually very heavy, and can only be undertaken by men of exceptional physique: no regular interval is given. The men work in gangs—there is no formal shift system—and take intervals of rest as arranged among themselves: they do not, in general, work for more than 8 hours a day. In flour mills no midday interval is usually given; the process is a continuous one, and a stoppage in the middle of the day would not only cause considerable expense, but would also interfere, to a serious extent, with the proper working of the mill.

16. Throughout India, except in Bombay, it is the general custom to call the operatives, or a certain number of them, to clean machinery on Sunday, or on the holiday given in accordance with section 5-B (2) (*b*) of the Act in lieu of Sunday: the work of cleaning lasts from 3 to 5 hours. It is contended that, under the terms of section 5-B, sub-section (2), clause (*a*) of the Act, it is open to the owners to employ the workers generally—and not merely the mechanical staff—in cleaning machinery, without granting a compensatory holiday, inasmuch as the periodical cleaning of machinery is covered by the words "the examination or repair of any machinery" in the section. We are clearly of opinion that this interpretation of the law was never contemplated, and is incorrect. The permission granted under section 5-B (2) (*a*) of the Act is, in our view, limited strictly to cases of *bonâ fide* repair or examination; and we are of opinion that it is a misuse of language to hold that the periodical cleaning of machinery, by the general body of operatives, constitutes either an 'examination' or 'repair' of the mill machinery, in the sense in which those words are used in the Act.

Extent to which the Act is ignored, or not strictly enforced, in the case of women.

17. Experience has shown that the restrictions imposed upon the employment of women by the present Act are suited neither to the operatives themselves, nor to their employers. As a consequence, the provisions of the Act dealing with this subject have been, as a general rule, ignored. In Bombay, for example, the women employed in the reeling and winding departments of the mills come and go as they like; they seldom work for more than 10 hours or so each day; and they do not take the intervals of rest prescribed by the Act. The interval or intervals of 1½ hours prescribed in the case of a full day's work, or the proportionate intervals to be taken in other cases, are found in practice to be too long; the women prefer to come late to their work, and to work continuously, except for short casual absences, for the whole period during which they may wish to remain in the factory on any one day. In ginning factories the women get the same interval as the men, if any interval is in fact given. In factories of this class it is customary to employ a certain percentage of extra hands—the percentage varying from place to place—in order to relieve the workers on the gins. It is claimed that in such cases the women, though they obtain no definite ascertained intervals of rest, do as a matter of fact obtain reliefs which in the aggregate equal or exceed the period

prescribed by the Act. Closely connected with this matter is the allied case where women are employed in gins after 8 P.M., no shifts having been approved. This practice is, of course, contrary to the provisions of section 6 (1) of the Act; it is urged, however, that if the number of additional operatives is sufficient to ensure that no woman shall be required to work for more than 11 hours—assuming an equal distribution of work—then the requirements of the law should be considered to have been met. This contention has been accepted in practice by the officials in Khandesh; and in that locality gin-owners are permitted to employ women at night if they provide the additional number of hands necessary to bring down each woman's working time, assuming an equal distribution of work among all the hands, to 11 hours. In certain ginning factories, more particularly those least liable to inspection, women are not infrequently worked for over 12 or even 13 hours, and in the ginning factories of Gujarat, which have not yet been brought under the Act, it is stated that women occasionally work as much as 18 hours a day, from start to finish, being relieved at odd intervals by other members of their families. In the sack-sewing sheds in jute mills, women are allowed to come and go as they like, without supervision of any kind over their working hours; and in the winding departments of certain jute mills women are occasionally allowed to work up to 13 hours a day.

Extent to which the Act is ignored, or not strictly enforced, in the case of children.

18. The most serious abuses which have arisen in connection with the neglect to observe the provisions of the existing law relate to the employment of children in textile factories. In the United Provinces generally, except Agra, in the Punjab, in Southern Madras, and in the cotton mills of Bengal, children have as a rule been habitually worked during the whole running hours of the factories, not on the excuse that they were over 14 years of age, but in pure disregard of the law. The importance of this will be more readily appreciated when it is mentioned that the factories which have been illegally employing children in this manner work from 10 to 14 hours a day. This practice often involves what must be regarded as the relatively minor illegality of working children after 8 P.M. In Agra, the Bombay Presidency, the Central Provinces, and Burma the law regulating the hours of employment of children has, as a general rule, been observed; in Agra, however, one set of half-timers in each mill was employed from 1-30 P.M. to 9 P.M.; in Burma a case was discovered where the children had been worked full time up to a date shortly prior to the Commission's visit to that province; in Bombay a few cases were discovered where half-timers, certified as such, were undoubtedly employed on full time; and similar practices were also noticed in the Central Provinces. In Calcutta the children employed in the jute mills are, as a rule, worked in two sets which are employed for 7 and 8 hours respectively, or for 7½ hours each, the object being to secure the attendance of the half-timers for the full period of 15 hours during which the mill runs.

19. The employment of half-timers for the whole day is undoubtedly greatly facilitated by the practice, which is adopted in many

mills, of splitting up the children's sets into two or more working periods, with a long interval between. In Bombay, for example, children are frequently employed in sets working 3 or $3\frac{1}{2}$ hours each, at a stretch, with an interval of the same duration between the working periods. In such cases the children almost invariably remain—in many cases they are required to remain—in the mill compound during the interval; and the temptation to the jobbers to utilize their services, if there is a shortage of labour, is great. Further, apart from practices of this kind of which the owner of the mill is probably not cognizant in many cases, it is indisputable that this "split set" system with long intervals places serious practical difficulties in the way of an inspector. Another custom which facilitates the employment of half-timers in excess of their legal hours of work is the practice of having a school for half-timers inside the mill compound. In many cases, of course, such schools have been opened with the best of motives, and the growth of abuses in connection with the overworking of the children has been carefully guarded against. But in other cases it is equally true that the so-called school has been used solely for the purpose of retaining the children at the mill during the whole working day, in order that this additional supply of labour might be utilized either as a regular measure, or temporarily when occasion demanded. The evidence contains numerous references to this question, both by millowners and officials; and the general opinion undoubtedly is that no school should be permitted within the mill compound. We are entirely in accord with that conclusion. During the course of our tour, we saw frequent instances of the abuse of the system; the "schools" were in many cases held in most unsuitable buildings; frequently no building at all was provided; the children who were supposed to be under instruction were often unable to read or write even the simplest words; no arrangements were made to secure their attendance, though the half-timers are in general not permitted to leave the mill compound; and the teachers were, as a rule, hopelessly incompetent. In one case, for example, a teacher entirely ignorant of English was supposed to be giving instruction in that language.

20. The next abuse which we find to be prevalent in connection with the employment of children is the working of children under 9 years of age as half timers, and of children under 14 years as full-timers on the excuse that they are over 14. The matter is one to which we devoted special attention in the course of our inspections. In almost every cotton factory visited we had all the children mustered outside for examination by the medical members of the Commission. It was found impossible to adopt the same method in the case of children employed in the jute factories: the numbers involved were so large that they could not be mustered outside without stopping the mill; but careful observations were made of the children both inside the mill premises and as they passed the mill gates after work.

In *cotton factories* a large number of children under 9 years of age are undoubtedly employed as half-timers. In the course of our

inspections of cotton factories in Bombay island we examined 821 children employed as half-timers: with few exceptions these had all been passed as over 9 years by the certifying surgeons; but 113 of them, or about 14 *per cent.*, were, in the opinion of the two medical members of the Commission, under 9 years. Similarly we found 12 *per cent.* of the half-timers examined by us in cotton mills in Madras to be under 9 years of age, 10 *per cent.* in Nagpur, and 7 *per cent.* in Ahmedabad; while of the so-called half-timers, working actually full-time in cotton mills, we found 17 *per cent.* in Calcutta and 15 *per cent.* in Cawnpore to be under 9 years. Of a total of 3,334 half-timers examined by us in cotton factories throughout India, 327, or nearly 10 *per cent.*, were under 9 years of age. Where children are certified prior to employment—as in the Bombay Presidency—the responsibility for this state of things must rest upon the medical officers to whom the work of certifying is entrusted; where it is not the practice to send children for medical examination prior to engaging them, the factory inspectors, and the *ex-officio* inspectors under the Act, must be regarded as responsible. We shall recur to the subject again when discussing the question of the arrangements to be made for the proper certification of children; for the present, we merely wish to state that the provisions of the law in this respect are in practice disregarded or circumvented to an extent which calls for the adoption of adequate remedial measures. The conditions prevailing in the cotton mills, though bad, are very much better than those obtaining in the *jute mills* of Bengal. There children who are obviously under nine years of age, many of them not more than 6 or 7 years old, are employed for seven or eight hours a day, and the proportion of under-age children employed as half-timers probably amounts to 30 or 40 *per cent.* of the total half-timer staff. It was admitted by the manager of one of the larger mills that the proportion of children under nine years of age was probably about 25 *per cent.*; the figure which we have adopted was arrived at after careful observations in many mills, and after watching the operatives file out of the mill gates at the midday change of shifts. We cannot give a statistical basis for our opinion, but may mention that the estimates arrived at by the individual members of the Commission were remarkably close, and point to the conclusion that the figure we have adopted is a fair one.

21. Similar conditions exist, both in cotton mills where half-time sets are worked, and in jute mills, as regards the employment of children under 14 years of age as full-timers. In the *cotton mills* which we visited, we selected for examination 1,057 of the smallest children employed on full-time work as being over 14 years of age, and found that 404 of them were under that age; but as we did not, except in four factories, muster *all* the full-timers, no fair percentage can be deduced from these figures. In two Bombay mills, where we mustered all the male operatives, we found that there were 346 full-timers under 16 years of age, and that 64, or 18 *per cent.* of these, were under 14; in a mill at Sholapur, where we held a similar muster, the certification for age had evidently been done much more carefully, as only 6 out of

186 young adults working full-time were under 14 years of age. As regards *jute mills,* we estimate from our observations that approximately 25 *per cent.* of the total number of full-time workers under 17 years of age are children who have not attained 14 years of age. In the case of mills which send children for certification prior to employment, it is obvious that any under-estimates of age made when the child originally began work as a half-timer will be perpetuated; and we have already stated that such under-estimates occur frequently in some centres, notably in Bombay. Full-time workers are in general engaged without medical examination; and, as there is a great demand for young adults to work on the spinning frames, the tendency is to employ all comers who can possibly be regarded as over 14 years. Children working in the mills are also placed on full-time as soon as they are, in the opinion of the overseer or manager, able to work for the whole day. This is due partly to pressure brought to bear by the children themselves, and by their parents; and partly to the fact that children willing to work full-time are a most valuable addition to the labour force of any textile mill, inasmuch as they possess that nimbleness of fingers which is essential for pieceing, and are also of a height which enables them to work at the spinning frames without undue fatigue. The wages earned are high; and the temptation to all concerned to have a half-timer placed on full-time work at the earliest possible moment is very great. The managers of the jute mills in Calcutta readily admitted the existence, if not the extent, of these abuses. One manager stated that he did not send children to the doctor to be certified prior to employment, as he had a shrewd suspicion that most of them would probably be rejected; while another frankly admitted that the mills had made no change whatever in their system consequent on the amendment of the Factory Law in 1891. The system in force prior to that date had, he said, been continued unaltered, and no attention had been paid to the provisions raising the age limits of children from seven to nine, and from twelve to fourteen. The existence of this state of affairs is in itself conclusive evidence that the present system of inspection has, in some provinces, absolutely failed; we shall recur to this subject later, when discussing the arrangements to be made for inspectional work in future.

22. Speaking generally, it may be said that the law as regards the age limits for the employment of children is generally observed in *non-textile* factories. Instances were found where children were employed in such factories, in contravention of the law; but such cases were very rare. This is probably due to the fact that the number of children for whom suitable work can be found in such factories is generally small, and the management can, therefore, devote a larger amount of individual attention to the case of each child employed. Managers can also discriminate among the various applicants for work.

23. The employment of children on full-time, and the working of under-age children, are the most serious abuses regarding child labour which we have discovered. The provisions of the law are also disregarded in other respects, however. It is the custom, for example, in some

mills to allow the children no midday interval unless the hours of work are so arranged that it is convenient, from the point of view of the general working of the factory, to grant them a recess at that time. The children, where they are employed for half-time only, are frequently required to work for seven hours continuously without any interval of rest; and one manager who adopted this system went so far as to claim that it was a sufficient compliance with the law if half an hour's interval were given to the half-timers *before they began work, or after they finished it.* We have already alluded, incidentally, to the employment of children after 8 P.M.; this infraction of the law is common in all cotton mills which work after that hour.

SECTION VI.—*The economic position and the habits of the Indian mill operative.*

The economic position and the habits of the Indian operative.

24. We have now stated the main results of our observations as to the hours of work in Indian factories, the general conditions of labour there, and the extent to which the existing factory legislation is either ignored or evaded. Before explaining our views as to the effect of these conditions on the health of the operatives, and making suggestions for the amendment of the law, we consider it advisable to call attention to the economic position and the habits of the Indian operative, in so far as these are relevant to the questions under discussion.

25. The habits of the Indian factory operative are determined by the fact that he is primarily an agriculturist, or a labourer on the land. In almost all cases his hereditary occupation is agriculture; his home is in the village from which he comes, not in the city in which he labours; his wife and family ordinarily continue to live in that village; he regularly remits a portion of his wages there; and he returns there periodically to look after his affairs, and to obtain rest after the strain of factory life. There is as yet practically no factory population, such as exists in European countries, consisting of a large number of operatives trained from their youth to one particular class of work, and dependent upon employment at that work for their livelihood. It follows that the Indian operative is, in general, independent of factory work, to the extent that he does not rely exclusively upon factory employment in order to obtain a livelihood; at most seasons he can command a wage sufficient to keep him, probably on a somewhat lower scale of comfort, by accepting work on the land; and there are also numerous other avenues of employment, more remunerative than agricultural labour, which are open to every worker in any large industrial centre. If the operative is not merely a landless labourer, he will in general be bound by strong ties to the land and to the village from which he originally came; he can at any time abandon factory life in order to revert to agriculture; and the claims of the village where he has a definite and accepted position are in practice, as experience has shown, sufficiently powerful to recall him from city life for a period

which extends, on the average, to at least a month in each year. The Bombay operative, resident in the Konkan, probably returns to his village for one month each year; and the jute weaver of Bengal, working longer hours and earning higher wages, is not content with less than two or three months. Whenever factory life becomes irksome, the operative can return to his village; there is probably always work of some kind for him there if he wishes it; and in most cases he is secured against want by the joint family system.

The position of the operative has been greatly strengthened by the fact that the supply of factory labour undoubtedly is, and has been, inadequate; and there is, and has been, the keenest competition among employers to secure a full labour supply. These two main causes—the independence of the Indian labourer, owing to the fact that he possesses other and congenial means of earning a livelihood, and the deficient labour supply—govern the whole situation.

26. Inasmuch as the Indian factory operative is not in general a factory operative, pure and simple, he is comparatively unskilled at his work; because his services are indispensable and difficult to obtain, he is, within wide limits, allowed by his employers to perform the work entrusted to him as and how he likes. We have constantly been reminded, during the course of our investigations, of the lack of skill of the operatives; and the numerous comparisons which have been made with the conditions prevailing in Europe place the relative inefficiency of the Indian operative beyond all possibility of doubt. The most accurate comparison of this nature which has been produced before us is that prepared by Mr. C. B. Simpson of Madras (page 313 of the printed evidence); it shows that, taking the whole staff of a cotton spinning and weaving mill, 2·67 hands in an Indian mill are the equivalent of one hand in a Lancashire mill. We have also been impressed with the fact that employers are generally disposed to concede promptly all reasonable demands made by their workers; and, even where the demands made are unreasonable, to treat them as proposals which it is desirable to accede to, if possible. Great nervousness is frequently displayed by employers of labour as to the effect even of trivial changes on the workers; numerous expedients are adopted to conciliate them, and the attitude of the employers throughout appears to be based upon the knowledge that the operatives are in fact the masters of the situation.

But although factory labour in India enjoys this exceptional position, it does not follow that the lot of the factory labourers is an enviable one, or that the labourers always work under satisfactory conditions. The history of the long hours movement in the Bombay mills, for example, suggests that Indian operatives are capable of remaining quiescent under conditions which would probably not be tolerated by a class of similar standing in any other country. The fact that the hours worked were grossly excessive does not appear to have struck the operatives, as a class, until the matter was taken up by the Government and by the press. Further

the history of the movement in Bombay, and of similar movements in other industrial centres, shows clearly that while the operatives fully understand the machinery of local strikes, and have repeatedly forced employers to comply with their demands in isolated cases, they are as yet unable to combine over any large area with the object of securing a common end by concerted action. One of the main difficulties experienced at present, when unrest appears among the workers, is in ascertaining the causes of that unrest. Frequently no definite demands are formulated, no grievances are stated, no indication is given as to the cause of the discontent; the operatives simply leave work in a body, or more commonly they drop off one by one without explanation, and accept employment under more congenial conditions in other factories.

27. The Indian operative is fond of change; he prefers to wander from mill to mill rather than remain settled; and the slightest causes are apparently sufficient to determine him to leave one employer in favour of another. We have found operatives who have travelled from one industrial centre to another throughout the greater part of India; and statistics which we have collected show that the *personnel* of the workers in mills in places so far apart as Bombay, Madras, and Nagpur changes almost completely in about a year and a half, on the average. The inducements to change are occasionally pecuniary, of course; but as a general rule the same rate of pay obtains throughout each centre, and in such cases the motive must be looked for elsewhere.

28. The Indian factory worker is, in general, incapable of prolonged and intense effort; he may work hard for a comparatively short period, but even in such cases the standard attained is much below what would be expected, in similar circumstances, in any European country. His natural inclination is to spread the work he has to do over a long period of time, working in a leisurely manner throughout, and taking intervals of rest whenever he feels disinclined for further exertion. Meals are generally eaten during the working hours of the factory; the midday interval is sometimes devoted to sleep; and the operative leaves his work frequently throughout the day in order to eat, smoke, bathe, and so on. As the result of careful inquiries made throughout our tour, we estimate that in the cotton textile mills in India the average operative probably spends from $1\frac{1}{2}$ to 2 hours each day, in addition to the statutory midday interval, away from his work. Where the pass-out system is in force, the usual limit is 12 *per cent.*, but that system is frequently very laxly enforced owing to the strong disinclination of the Indian factory operative to submit to discipline. Operatives have struck, and forced their employers to give way, when passes up to 15 *per cent.*, or even higher, were granted; the workers demanded the abolition of the pass-out system, and compelled their employers to revert to the old arrangement where each man was allowed to come and go freely. To permit of these temporary absences during working hours, the complement of workers

in an Indian textile factory is always from 10 to 15 *per cent.* in excess of the number of hands actually required to man the machinery at any one time. In addition to these daily intervals, the operative probably takes leave for one month or longer in each year, in order to return to his village. In jute mills, where the operatives in the spinning and preparing departments work on an average 10 hours only, there is not nearly so much loitering; but the hands take a longer holiday—varying from one to three months each year—in order to return to their homes; and the number of workers on leave during the hot weather is frequently so large that the production of the mills falls as much as 25 *per cent.* below the normal.

Facts showing that the Indian operative in a cotton textile factory generally works in a casual manner are to be found on almost every page of the recorded evidence; and we are convinced, from actual observation, that the statements made as to this matter are substantially correct. The operative in a cotton mill is, however, usually called upon to work for excessive hours; and we are disposed to think that there is some causal connection between this fact and the extent to which loitering occurs. As we have already stated, the operatives in the Calcutta jute mills, working short hours by shifts, do not idle away time to anything like the extent observable in Bombay; in engineering shops throughout India, where the hours seldom exceed eight a day, there is very little idling; and in some of the better managed mills, where there is strong European supervision, and the hours do not on the average exceed ten or ten and a half a day, there is little or no idling. In a woollen mill in the United Provinces, working on an average only $10\frac{1}{3}$ hours a day, accurate statistics have been collected for some years, and it was found that on two selected days, one in May and one in November, about 44 *per cent.* of the workmen remained inside the mill during the whole of the working hours; the average operative there does not leave his work for more than half an hour in the day. In Agra, on the other hand, where the operatives come from the same part of the country, but where the working day varies from $13\frac{3}{4}$ to $15\frac{1}{4}$ hours, we were particularly struck with the listless, lazy manner of the operatives, and with the large number loitering about in the compound. Similar comparisons obtruded themselves upon our notice throughout the tour; the system in force at Delhi, for example, compares most unfavourably in this respect with that obtaining at the Empress Mills in Nagpur, or the Buckingham and Carnatic Mills in Madras. We shall deal with this question, from the statistical point of view, when discussing the effect on production of working days of varying length; at this stage it will suffice if we state that the comparisons which we have been enabled to make have convinced us that the Indian operative, while naturally disposed to take work easily, possesses considerable adaptability, and that the length of the day determines to some extent the manner in which he works. Where the hours are short and supervision is good, the operatives can be trained to adopt fairly regular and steady habits of working; where the hours are long and the discipline of the factory is bad, the workers will idle

through the time, and take frequent intervals away from their work. The natural tendency of the Indian operative is to spread his work over a long period, working at it in the most leisurely manner; but that tendency can, we consider, be corrected to some extent by the maintenance of proper discipline, and, as an absolute *sine qua non*, by working the factory for reasonable hours only.

The wages of operatives in textile factories vary from place to place, but are everywhere considerably higher than those earned by the same class of men in other employments. Taking the cotton factories all over India, monthly wages or earnings vary within the following limits:—half-time children from Rs. 2½ to Rs. 4½, full-time boys between 14 and 17 years of age from Rs. 5 to Rs. 13, ordinary hands in the card and frame departments from Rs. 7 to Rs. 18, head spinners (mule) from Rs. 25 to Rs. 35, mule piecers from Rs. 10 to Rs. 16, weavers minding one loom from Rs. 10 to Rs. 15, weavers minding two looms from Rs. 18 to Rs. 35, women (reeling and winding) from Rs. 5 to Rs. 12. The wages in the jute mills are rather higher.

29. The majority of the factory operatives in the larger industrial centres being, as has been stated, only temporarily resident there, the question of their housing has an important bearing on their habits. In Calcutta most of the textile mills have built commodious settlements near the mill premises for large numbers of their operatives; and similar arrangements have been made by several mills in Upper India. In these settlements the workers are comfortably housed at rents which average only 12 annas a room *per* month, and the general opinion, which is supported in the case of one mill by actual statistics, is that the provision of house accommodation undoubtedly renders the labour supply more regular and forms a considerable attraction to new recruits. In Bombay, on the other hand, where available land is scarce, little has been done by the mills in this direction, and the operatives as a rule herd together, for the sake of economy, into large, many-storeyed, barrack-like buildings, called *chawls*, which are provided by private enterprise. The rooms occupied by the mill-hands are in general much over-crowded; there is little privacy, and no home life. The rent of a room 12′ × 10′ × 9′, which frequently accommodates five or six persons, ranges from Rs. 2 to Rs. 3 a month. Workers not accompanied by their families generally board with some other operative who has a female relation living with him; the latter cooks the food for all the men, and takes it to the mill. The general rate for board and lodging, where the boarders with their host and his family share one room, is apparently Rs. 6 a month for an adult and about Rs. 5 for a youth.

30. Working the long hours which prevail in most of the textile factories, and being able, owing to the scarcity of labour, to command a high rate of wages, the average operative earns more than the amount required to keep himself and his family in the standard of comfort to which they have been accustomed. Owing partly to this fact, and partly to the monotonous and wearing nature of the life he leads, he frequently spends a considerable portion of his earnings in drink.

The consumption of liquor among factory workers is, we consider, undoubtedly greater than among men of the same rank in life engaged in other occupations ; but we have no reason to think that this points to excessive drinking. Some members of the Commission had frequent opportunities, during the period of their stay in Bombay, of observing the mill operatives in their own quarters, at all hours from the time of the closing of the mills till late at night, and only one or two intoxicated men were seen, out of thousands, during a period of about seven weeks.

31. One of the main difficulties to be contended with in this country by employers of labour is the low standard of living among the workers. As usual, this low standard of living is accompanied by low efficiency; but the chief difficulty in India is that the present standard of living is rising very slowly, and the workmen respond feebly to the ordinary economic impulses which are so effective in European countries. A rise of wages in India may actually diminish the labour supply, in the first instance, in place of increasing it. Many employers of labour contend that a rise in wages, by enabling the workers to earn a larger sum in a given time, results in their absenting themselves from work for longer periods ; as their wants are few, and not expansive, the only object to which they can in general apply their savings is to support themselves in idleness ; the more they can earn in a given time, the more frequent holidays they take, and the longer they absent themselves from work. We do not entirely support this view ; but it seems to us indisputable that it contains a considerable element of truth in present circumstances. Matters are gradually improving in this respect, however ; the standard of living is undoubtedly rising all over India, though slowly; and there are some indications that a class of factory operatives, detached from agriculture and village life, and depending largely or solely upon industrial employment, is beginning to be formed.

SECTION VII.—*The effects of the present conditions of employment on the physique of the workers.*

Effects of the present conditions of employment on physique: lack of statistics.

32. In considering the question of the effect of the present conditions of the employment on the physique of the workers, we are met by the initial difficulty that no accurate statistics are available. Every effort was made, during the course of the tour, to obtain definite statistical information on the subject; but it was found that vital statistics in India do not in general differentiate between factory workers and the mass of the population; and records of mortality in factory centres were, from various causes, inconclusive as regards the main object of our enquiries. It was thought that figures of some value might be obtained by weighing operatives in each factory visited, and comparing the results with similar figures obtained from jails throughout India. This procedure was, in the

absence of any other practicable alternative, finally decided upon. In almost all factories visited a number of adult operatives selected as fair average specimens were weighed, and the average weight recorded. The figures so obtained, contrasted with the jail averages, are tabulated in Appendix C.

The general result deducible from these figures is that the factory operatives weigh, on the average, about 8 to 10 pounds less than the average of the jail population between the ages of 20 and 50. The degree of importance to be attached to this result is a difficult question. In the first place, it is impossible to assume that the jail population between the ages of 20 and 50 correctly represents the general average of the population from which the factory operatives are drawn; in the second place, prisoners generally gain in weight in the Indian jails, and it is probable that their average weight considerably exceeds that of the population from which they are drawn; and, in the third place, factory operatives are in some cases not drawn from the provinces in which they work. In view of these considerations we are unable to formulate any definite conclusion from the figures compiled; we have decided to reproduce them in the report, however, as they may possibly prove of some value in the absence of any other statistical information on the subject.

Statistics of relative mortality in Bombay City.

33. In Bombay City, where efforts have for years past been made to obtain accurate mortality returns, it has been found possible to compare the death-rate of factory operatives with that of "general labourers." The statistics have been compiled by Dr. Turner, the Executive Health Officer of the Municipality, and will be found appended to his written evidence. The basis upon which they are framed will be evident from the statement itself, and from Dr. Turner's oral evidence. These statistics show that, comparing the weavers and spinners in the Bombay mills with the dock labourers, general labourers, and domestic servants in that city, the mortality among the mill-hands, year by year over a period of seven years, is considerably less than among the general labourers; the deaths from respiratory diseases are also less; but the death-rate from phthisis is higher. The average mortality *per* thousand of the population for the seven years from 1900 to 1906 is:—

	Phthisis.	Other respiratory diseases.	All causes.
general labourers	2·26	3·55	31·58
factory operatives	2·38	1·88	18·45

The death-rate from phthisis is markedly high, as compared with the low general death-rate of mill operatives. Dr. Turner, who has had a long experience of the conditions prevailing in Bombay, and who was also a member of the Textile Factory Labour Committee, is of opinion that "the factory population is not below the average of the same class as regards physique." He agreed that the statistics which he has furnished show that factory hands are healthier than general labourers, and he assures us that there can be no question as to the

correctness of the total death-rates shown in the statement supplied by him. He considers that, with the exception of phthisis, mill-hands are much less liable to respiratory diseases than general labourers.

Lieutenant-Colonel Mactaggart's views.

34. We have already referred to Lieutenant-Colonel Mactaggart's exceptional qualifications for forming an accurate opinion upon this subject, and would refer to Appendix B, where his views on the question are given in detail. After inspecting with us 57 factories in Bombay, Ahmedabad, and Broach, he "is distinctly of opinion that the physical condition of the factory operatives in Bombay is in every way excellent, and that it compares favourably with that of agricultural labourers, and men of the coolie class generally." With reference to the question of the prevalence of tuberculosis among the mill-hands, he states that "the marked absence of all signs of tubercular disease of glands or joints led me to think that tubercle, in spite of the assertion of one medical witness to the contrary, cannot be common among factory operatives in Bombay." His general conclusion is that "the hours of labour now in force in the Bombay factories have had no bad effect on the health of the operatives"; and he expresses this opinion in the most emphatic manner. In this connection, we would invite attention to the inspection notes recorded regarding mills 43 and 48 in Bombay. At these inspections the whole of the mill operatives employed, approximately 1,500 in number, were mustered for examination. The remarks which we then recorded were as follows:—

> *Mill* 43—889 *adults.*—"The general physique of the operatives was excellent; there was a remarkable absence of skin disease, or other indication of malnutrition. Only one had marks of tuberculosis of glands. The men were a big lot; 60 were weighed, giving an average of 102 pounds."
>
> *Mill* 48—584 *adults.*—"The men, though as a rule slight in build, were in good physical condition; none of them showed any signs of disease of glands or joints, and there was a remarkable absence of skin disease. Weighed 30 adults from the carding and spinning departments—average weight 94 pounds."

These notes were recorded from the joint observations of Lieutenant-Colonel Mactaggart and Dr. Nair.

Evidence of other medical witnesses on the question.

35. The evidence of the medical witnesses on this subject is, as might have been expected, somewhat conflicting. On the whole, however, the majority are of opinion that there is no difference in general health or physique between factory operatives and the average of the population of the same class. A number hold that factory operatives are of better physique, and more healthy, than the non-factory population of the same class; they base this view upon their personal experience of both classes, and contend that the factory operative is generally much better nourished than the non-factory worker, that he is protected to a much greater extent than other labourers from extremes of temperature, and from the enervating effects of constant exposure to the sun. On the other hand, a considerable number of medical witnesses—almost all of whom practise in Bombay—are of opinion that factory operatives are decidedly inferior to the general

population of the same class, both as regards physique, and resisting power to the attacks of disease. They consider that mill-hands are peculiarly liable to phthisis and other respiratory diseases; and that their health has been undermined to a considerable extent owing to the long hours worked, the confinement in an impure and humid atmosphere, and the strain to which they are subjected. The death statistics prepared from the city records are considered inconclusive as it is stated that the mill-hands, when they fall ill, leave Bombay, and proceed to their homes. The absence of old men from the mills—a fact regarding which there can be no doubt—is also quoted in support of the opinion that the hands age prematurely, and become unfit for mill labour at a comparatively early age, returning to their homes with their health impaired, and their constitutions shattered. In considering the weight to be attached to these opinions, it is to be remembered that they are, like the opinions to the contrary effect, entirely unsupported by statistics; and with one or two exceptions, they refer to the mill-hands in Bombay City only. Now the only fairly accurate statistics available on the subject are for Bombay City, and they do not support the views put forward, except as regards the greater liability of the operatives to phthisis. The contention that these statistics are in themselves unreliable is met, more or less completely, by the fact that the death-rate in the Ratnagiri district, from which the Bombay mill operatives are recruited, is one of the lowest in the whole Presidency. These death-rate statistics, though possibly of but little value absolutely, have a relative value which cannot be ignored; and they appear to dispose finally of the contention that the true mortality among mill operatives in Bombay is far in excess of the figures quoted in Dr. Turner's statement.

Our conclusions as to the question of physical deterioration : adult males.

36. We have now given a brief resumé of the statistical information available as regards the physical condition of the factory operatives; we have quoted Lieutenant-Colonel Mactaggart's opinion on the subject; and have summarised the views held by the medical witnesses examined by us. It remains for us to state our own conclusions. Throughout the enquiry, this subject was constantly before us; in every inspection which we made, we carefully examined the general physique of the operatives; and we were constantly on the watch for any signs pointing to the existence of physical deterioration. So long as Lieutenant-Colonel Mactaggart remained with us, he and Dr. Nair, jointly, devoted special attention to this matter; when Lieutenant-Colonel Mactaggart's services were no longer available, the enquiry was continued, upon the same lines, by Dr. Nair and by the Commission as a whole. Despite the constant and careful attention paid to this matter, we did not, during the whole course of our investigations, find any indications of physical deterioration among adult male factory operatives. As regards non-textile factories, we accept this as conclusive, in the absence of any conditions tending to deterioration, and record our opinion that there has been no physical deterioration due to the present conditions of factory employment. Our conclusion in respect of textile factories requires fuller explanation.

37. While admitting that signs of physical deterioration were nowhere observable amongst the adult male operatives of the textile factories visited by us, we consider that the past and present conditions of work in many factories are undoubtedly calculated to cause physical deterioration, owing to the severe strain thrown on the constitution by excessive hours of work in humid and often badly ventilated work-rooms. We also think it possible that, if the life history of a considerable number of the operatives working under these conditions could be traced to its close, there would be evidence of premature exhaustion. We were everywhere struck with the marked absence of elderly men from textile factories, in spite of the fact that the demand for labour is largely in excess of the supply; and we consider that this points to the conclusion that the operative becomes unable to stand the strain of work under present conditions at a comparatively early age.

38. On the other hand, there is the undoubted fact that the Indian operative readily adapts himself to circumstances, and to a great extent counteracts the evil effects of an increase of working hours by idling more while at work. To take one instance, in the cotton mills in Agra, which work very long hours, from daylight to 9 P.M., it was admitted that the amount of loitering among the hands is much greater than in mills working shorter hours, and that more extra hands have therefore to be employed. We made an actual count of the loiterers in the compound of one of the Agra mills, and found that as early as 9 A.M. 15 *per cent.* of the hands were idling outside. We also ascertained that in these mills the European supervisors are allowed to leave work at 5 P.M., and return for a few minutes only to see the mill closed at 9 P.M. Between 5 P.M. and 9 P.M. great slackness prevails in the mill. We have already shown that on an average the worker in an Indian cotton mill spends from 1½ to 2 hours of the actual working day away from his work. In addition to these daily intervals, each operative generally takes two or three days holiday each month, and an annual holiday which may extend to from one to three months. In order to obtain accurate information on this subject, the books of two representative mills in Bombay, belonging to different owners, were, through the courtesy of the managing agents, scrutinised in detail by one of the members of the Commission. The general results are given, in tabular form, below :—

Average absence per *operative* per *year, over the three-year period* 1905–06–07.

Department.	*Mill A.*	*Mill B.*
Carding	55 days	45 days.
Throstle	62 ,,	51 ,,
Weaving	72 ,,	50 ,,

That is, the average operative may be said to take two days off work every month, and a further annual holiday of from 3 to 7 weeks. In addition, he receives the Sunday holiday, and from four to ten native holidays during the year.

39. Our conclusions regarding the effects of the present conditions of employment on adult males in textile factories may be summarised as follows :—

(*a*) no physical deterioration is observable anywhere among the operatives actually at work;

(*b*) the life history of operatives after they leave factory work cannot be traced, and therefore any subsequent deterioration would not come under our notice;

(*c*) the operatives counteract to a considerable extent, by their leisurely mode of work, the evil results which would naturally follow from excessive hours of work.

(*d*) the very long hours worked in many mills in the past, and in some mills at present, are calculated to produce physical deterioration; if generally adopted or persisted in for any length of time, they would almost certainly result in the physical deterioration of the operatives.

Physical condition of young adult males.

40. Little information is obtainable from the medical evidence as to the physical condition of young adults working in factories; but our observations lead us to think that this class—the workers between the ages of 14 and 17, who are employed for the full working time of the factory—are in general in good physical condition, if somewhat undersized. In Madras, the Central Provinces, and the Punjab the young adults are inferior to the standard in other provinces, and are in some cases thin and weakly looking. As no separate registers or statistics relative to this class are kept, and as there is at present nothing to direct special attention to them, we have had to rely exclusively on our own observations in respect of this matter.

Physique of female operatives.

41. The physique of the female workers is uniformly excellent. Writing on this subject Lieutenant-Colonel Mactaggart notes that "the women working in the factories seemed to me to be a particularly healthy lot, and quite capable of working the same hours as I have suggested for young persons." The general trend of the medical evidence is also to the effect that the female workers are of good physique, and are not in any way injuriously affected by their employment in factories. In this connection we would invite a reference to the remarks which have already been made as to the habits of work of these operatives. They come and go as they like, since they are generally on piece-work. In cotton textile factories they are employed almost exclusively in the reeling and winding departments, where they work under exceptionally favourable conditions. The ventilation of these departments is in general excellent; there is no noise or dust; the wages earned are good; and the work imposes no great strain on the operatives. In jute mills women are employed in the preparing, winding, and sewing departments only; the hours worked do not, as a rule, exceed ten; and the hygienic conditions are favourable.

42. The children examined during the course of the tour were in general of poor physique, thin and weakly looking, especially in cotton textile factories. We devoted special attention to this subject, and in almost every cotton factory which we visited we had *all* the children mustered outside for inspection. In jute mills we observed large numbers of children both at work and outside the mills, and found them a rather better lot than those in the cotton mills, but still in many cases weak and poorly developed. Owing to the prevalence of abuses, which have already been discussed fully—the working of half-time children for full time, the employment of children under age, the neglect to give regular intervals, and so on—it is difficult to form a clear idea as to what the effect of the present legal working hours, if faithfully adhered to, would have been on the general health and physique of the children. We are satisfied, however, that the children at present working in the factories are somewhat below the normal standard, although we are unable to say to what extent the abuses which we have mentioned are responsible for this. In Cawnpore and Northern India generally, where the adult mill-hands are as a rule of fine physique, we were specially struck with the poor appearance of the children. There can be no doubt that doffing, even though intermittent, is hard work for a child of 9 years of age; and some relief from present conditions seems to us to be called for in the case of children.

Physique of children.

43. The remarks made as to the general physical condition of the operatives—adult males, young adults, women, and children—do not apply to seasonal factories, where the working period is in general short. The chief seasonal factories are cotton gins, cotton and jute presses, and rice mills. In ginning factories the average season extends to about four or five months; the workers are chiefly middle-aged or old women, drawn from the field-labouring class; and by accepting work in these factories they obtain employment during a time when the demand for field-labour is not great. The work in itself is light; and, owing to the system of daily or weekly payments adopted, the gin-tenders are in a much more independent position than the average factory labourer. If the work proves too hard, or the hours too exhausting, they can leave at once. The gins are occasionally worked, with one set of hands, for periods of from 12 to 18 hours; one set of workers would not, however, usually work for more than 14 or 15 hours, at the most, and during this time they would be allowed to take frequent intervals of rest, which are provided for by engaging a number of additional workers. The period of pressure does not ordinarily exceed one month, or a month and a half, as a maximum. In cotton and jute presses the season is approximately of the same duration. The presses are manned by adult males, and—though occasionally worked for longer periods—the average day does not exceed 12 hours. The men work in gangs, and it is seldom that any individual works for more than 8 hours on any one day. The conditions prevailing in the rice mills have already been described. In all these cases, though periods of pressure occur, they are always short; and no injurious results to the operatives appear to have ensued. In presses

No physical deterioration among employés of seasonal factories.

the men are usually of exceptional physique; they work short hours; and they earn very high wages. In the rice mills the bulk of the labour is imported from Madras; the workers are of exceptionally good physique; and they also earn very high wages. In gins the work is light; the operatives are enabled to maintain themselves at a time when other employment is scarce; and, as in the other cases, the period of pressure is comparatively short. We have no reason to believe that the conditions of employment in these seasonal factories are such as to cause physical deterioration among the operatives.

SECTION VIII.—*Should a direct restriction be placed upon the hours of work of adult male factory operatives?*

Discussion of the proposed restriction of working hours of adults.

44. The question of the imposition of a direct restriction on the working hours of adult male factory operatives is the most important of the various points referred to us, and it will be necessary to discuss it at some length.

In the latter portion of the year 1905 the Bombay mills worked for 14½ hours daily with one set of hands. That state of affairs happily did not continue long in Bombay; but there is no guarantee that it will not recur, and we find it prevailing permanently in the mills at Agra and other industrial centres in Northern India. We consider that it is the duty of Government, on both economic and humanitarian grounds, to prevent the continuance or the recurrence of that system. We are convinced that it is impossible to work men regularly for 14½ hours a day—even in the manner in which Indian operatives admittedly work—without serious permanent injury to their health; and also that any system under which they are required to work for such excessive hours must necessarily be prejudicial not only to them, but also to the industry with which they are connected. Apart altogether from economic grounds, however, it appears to us indisputable that the Government cannot permit a large section of the industrial population to be regularly worked for 14½ hours a day. The evidence which has been recorded shows that in many cases the workers have to walk two or three miles before arriving at the mill in the morning, or after leaving it at night; they are unable to ascertain the time exactly; and in consequence a 15-hour day from start to finish may mean—and in many cases does mean—that the operative is absent from his home for 16 or 17 hours each day. In other words, when working a 15-hour day many operatives can, as a maximum, obtain only seven or eight hours at their homes. In our opinion no further argument is necessary to prove that such a condition of affairs must inevitably lead to the deterioration of the workers; it must also render factory work so unpopular that the labour supply necessary for the adequate development of the industrial resources of the country will not be forthcoming; and the abuse is of so grave a character, so opposed to all humanitarian considerations, and so fraught with serious consequences both to the industrial population, and to Indian industries, that the Government would, in our opinion, be justified in taking any

steps which experience might show to be necessary in order to prevent it from continuing or recurring.

Possibility of the abuses of 1905 recurring.

45. During the course of the examination of the witnesses, we were repeatedly assured that the conditions which obtained in the Bombay mills in 1905 would not again recur. We can find no satisfactory guarantee as to the correctness of this forecast, however. If the market conditions should again become peculiarly favourable, the inevitable tendency will be, if we may judge from the history of the past, to work as long hours as possible in order to take the fullest advantage of a state of affairs which will, *ex hypothesi*, be temporary only, and we consider that no reliance can be placed upon the vague general assurances to the contrary. We have already seen that the Millowners' Association is powerless to enforce any rules of a restrictive character on individual proprietors, while a considerable number of operatives are prepared to work for 15 hours a day, if they can thereby obtain correspondingly higher wages. In these circumstances it appears to us essential that some practical arrangement, which does not in any way depend upon the co-operation of the millowners, must be devised before any security can be felt that the conditions obtaining in 1905 will not be again repeated.

We also believe that the great mass of the workers in textile mills would welcome any measure calculated to prevent their being worked excessive hours in future. In the absence of any direct representations from the workers themselves, we took every opportunity in the course of our tour of questioning the operatives and personally ascertaining their views; and we found them, with few exceptions, strongly opposed to the practice of working excessive hours, and in favour of interference by Government to prevent it. It may be that they hope to be able to force their employers to pay them for a reduced working-day the same wage as they earn now: this will be a matter for settlement between the employers and the employed when the time comes, and we do not anticipate that any serious difficulty will occur in effecting this settlement. But we are convinced that the large majority of workers desire the restriction of hours, even at a sacrifice.

Objections to any direct restriction of hours.

46. The most obvious restriction of this nature is a direct limitation of the working hours of adult males. We would be prepared to recommend the imposition of that restriction, if it were clearly demonstrated that the object in view could not be attained in any other manner. We are satisfied, however, that that is not the case; and we would strongly deprecate any direct limitation of the working hours of adults until all other restrictive measures of a practicable character have been tried, and have been proved inadequate. Firstly, we do not consider that any case has been made out in favour of applying a principle which is admittedly of somewhat doubtful validity, which commands acceptance in very few countries, which is open to the gravest objections from a practical point of view, and which supplies a remedy very much more drastic than the circumstances of the case demand. We are satisfied, as a result

of careful observation and enquiries, that the recommendations which we shall shortly make will, in themselves, be sufficient to prevent the continuance or recurrence of the abuses against which we seek to guard, and in these circumstances we consider it unjustifiable to resort to a measure which has never been accepted in England, and which would undoubtedly cause the gravest inconvenience in practical working.

In the second place, the direct limitation of the working hours of adults would impose on *all* factories a restriction which we find to be required only in textile factories. In no other industry have we found the existence of any abuse, in the matter of excessive working hours, calling for interference, and we are strongly opposed to the imposition of any unnecessary restriction on the employment of labour in factories, especially at a time when the further industrial development of the country is of such vital importance.

In the third place, the strongest practical objections exist to the general enforcement in India of any law rigidly restricting the working hours of adult males. Every effort is, of course, made by factory-owners to systematise working conditions, to make the working hours as uniform as possible, and to prevent the necessity for working overtime. But in all industries overtime is frequently necessary; and we believe that it would be impossible to devise a workable system of exceptions which would give employers the freedom they could legitimately claim, and at the same time secure the general enforcement of the restriction. In France the factory law directly restricting the working hours of men contains numerous exceptions for all the occasions on which overtime may have to be worked in different industries; and previous notice must be given to one of the ninety-one inspectors by an employer desiring to avail himself of any exception. We consider that such a system would be utterly unworkable in India. The area over which factories are scattered in India is so vast, the inspectional staff is necessarily so small, and the employers of labour in the smaller factories are frequently so imperfectly educated, that the system could not be enforced without the gravest injury to Indian industries. Even if the whole field of existing industries could be covered by a list of special exceptions, it is obvious that no provision could be made in advance for the new industries which are springing up, and which it is necessary to foster and encourage in every possible way. Official procedure necessarily involves considerable delay; and it is possible that while the Government was ascertaining the exemptions necessary to enable a new industry to establish itself, that industry might find it impossible to continue the struggle for existence.

In the fourth place, the imposition of a direct restriction on the hours of adult labour would be repugnant to the great majority of capitalists, both in India and abroad, who have invested, or are considering the question of investing, money in India. This is clear from the record of evidence. In the cases where owners of factories have expressed their approval of legislation restricting the hours of work of adult males, it is apparent that they are in favour of that course, not because they consider it advisable in itself, but because

they are impressed by the existence of serious abuses, and see no other practicable alternative which would be effectual in preventing these abuses. Any course calculated to hamper employers in their dealings with their labour force, and to impose serious practical disabilities upon them in the internal management of their works, will certainly be keenly resented. This statement of the case does not, however, exhaust the question. As Sir John Hewett has pointed out in his note, which is printed with the evidence, there is reason to fear that, if legislation is now undertaken to limit the working hours of adult males to 12 or 13 hours, it will not stop there, and attempts will be made in the future—not always suggested merely by the idea of doing justice to the operatives—to restrict still further their working hours. It was impossible to avoid observing the degree of importance attached to this question by English and Indian capitalists throughout India. It would be outside our province to enquire as to the justification for this attitude; but there can be no doubt that the opinion is widely and strongly held that, if interference with adult labour be permitted, pressure will be brought to bear in order to utilize that power of interference in a manner calculated to promote the interests of Lancashire and Dundee, rather than of India. The prevalence of this impression—whether it be right or wrong is, for the purpose of the present discussion, immaterial—would undoubtedly adversely affect India's industrial development.

Summary of our position on the question.

47. We trust that we have made our position in respect of this matter clear. We are strongly opposed to any direct limitation of adult working hours, because we consider that there is no necessity for the adoption of this drastic course, because we are convinced that it would cause the gravest inconvenience to existing industries, most of which have never worked long hours, and because we think that such a measure would seriously hamper the growth of industrial enterprise. We believe that the working of adults for excessive hours in textile factories will be effectively prevented, incidentally, by the measures we propose for restricting the hours of "young persons," women, and children. Had this effective alternative not been available, we are of opinion that direct limitation of the working hours of adults would then have been not only justifiable, but necessary, in order to prevent abuses which the Government could not, upon economic and humanitarian grounds, permit to continue or recur.

Section IX.—*The measures on which we rely for an indirect limitation of the working hours of adult males, and the probable effect of these measures.*

The restrictive measures which will lead to a limitation of adult working hours.

48. The measures on which we rely for an indirect restriction of the working hours of adult males to reasonable limits are:—

(1) The formation of a "young persons" class, to comprise all young adults between the ages of 14 and 17, with working hours limited to 12 in any one day;

(2) the reduction of the working hours of children from 7 hours to 6 hours;

(3) the prohibition of the employment of "young persons," women, and children before 5-30 A.M. or after 7 P.M.;

(4) the substitution of a compulsory interval after six hours' continuous work, in place of the present mid-day interval; and

(5) the assimilation of the restrictions placed upon the employment of women to those proposed for the "young persons" class.

The first four of these measures are the most important; the last is merely of subsidiary importance, in so far as the present question is concerned.

Before discussing the probable effect of these suggested amendments of the law, we desire to lay stress upon the fact that they have not been proposed merely in order to avoid the necessity for the imposition of a direct restriction on the working hours of adult males. That will, we hope, be one of the consequences which will follow from their adoption; but the measures themselves were accepted by us as necessary solely upon their own merits. We shall, in the following sections of the report, discuss these proposals fully, and explain in detail the reasons which appear to us to necessitate their acceptance; for the present, we shall confine our remarks to the probable effect of these measures on the working hours of adult males.

Effect on cotton mills, spinning department.

49. As has already been stated, excessive hours are in general worked in textile factories only; it will not therefore be necessary to discuss the effect of our proposals except as regards these factories. In the cotton spinning mills of Bombay, we have ascertained, by a detailed count in two cases, that approximately 24 *per cent.* of the adult male workers would fall within the "young person" class, if the age limits were fixed at 14 and 16. With the age limits at 14 to 17, as we propose, it may safely be assumed that the number of "young persons" will be approximately 25 *per cent.* of the present total adult male staff in spinning mills, and in the spinning department of spinning and weaving mills. This estimate agrees closely with those given by the majority of the witnesses who were questioned on this point, and with the results of detailed counts made by us in a mill at Hathras (19 *per cent.*) and another at Sholapur (23 *per cent.*). In addition, from 3 to 5 *per cent.* of the staff in spinning mills will be composed of children, employed as doffers: the number is higher in Ahmedabad, where about 12 *per cent.* of the total staff are half-timers: in Bengal the proportion varies from about 10 *per cent.* to 12 *per cent.*: in Madras the average is about 20 *per cent.* It is, we think, a safe estimate to hold that approximately 30 *per cent.*, or say one-third, of the staff in the spinning department will be composed of children and "young persons." That being so, it is clear that the hours fixed for children and young persons will absolutely determine the working hours of the whole department.

The great majority of the witnesses examined agree on this point. In one or two cases it was suggested that a restriction of this character could be overcome by working the children and " young persons " harder during their legal working hours, and giving the male adults a somewhat easier time then, in consideration of their working the mill or department, as the case might be, unaided for the last hour or hour and a half at the close of the day, when the children and " young persons " had left. Such a scheme would not, in our opinion, be successful. Men are not capable of doing doffing work so quickly and expertly as children; and it is very questionable whether they would, in any case, agree to do work which is regarded by them as peculiarly the work of children. Again, adult males are not good piecers; for that, nimbleness of fingers and small stature are essentials. Agreeing in this respect with practically all the managers who have been questioned on the subject, we are convinced that the hours of work fixed for the children and "young persons" would absolutely determine the working hours of all persons employed in cotton spinning.

Effect on cotton mills, weaving department.

50. In the mills which combine spinning and weaving, the percentage of "young persons" and women employed in the weaving and connected departments is not so large. Practically no children are employed in these departments. Actual count in two cases showed that, while only 4 *per cent.* of the hands in the weaving shed were "young persons," the number of women and " young persons " in the weaving, winding, drawing, sizing, and connected departments was in one case 17 *per cent.*, and in the other 25 *per cent.*, of the total hands employed there. The number of protected persons is perhaps not so large that their hours would determine the working hours of the whole department. But the internal arrangements of all spinning and weaving mills are based upon the assumption that the spinning and weaving departments will work for approximately the same hours, or at any rate that the weaving department will not work longer hours than the spinning department; and the machinery in the two departments is in almost all cases driven by the same engine. It would not be economical as a rule to run one department while the other remained idle. Again, the weavers in cotton mills are much more independent than the spinners, a fact which, as regards Bombay, appears clearly from the evidence. They earn higher wages, and they have in many cases refused to work the same hours as the spinners, when they considered these hours too long. We do not believe that any considerable number of weavers could be induced to accept a permanent system under which they would work on at night, after all the spinners had left the mill. Taking all these facts into consideration, we are satisfied that it will be found impracticable to work the weaving department of any cotton textile mill longer than the spinning department. The natural tendency to bring the working hours to a uniform level throughout the mill will be too strong to be resisted.

The restrictions which we suggest as regards the employment of "young persons," women, and children will not, theoretically, be sufficient to force millowners to limit the running time of their mills to 12

hours, inasmuch as it would be possible for them to work the children, women, and "young persons" in shifts spread over the whole period from 5-30 A.M. to 7 P.M., while the adult males worked without being relieved. But we are convinced that this system of shifts would be impossible in cotton mills, both on account of the disorganisation of work which would result from the frequent changes of the operatives, and also because of the scarcity of labour. Further, under the arrangement which we propose for intervals of rest after 6 hours' continuous working, the maximum working hours of adult males in cotton textile mills, which require half-timers "young persons" and women as an integral part of their staff, would necessarily be reduced to 12½ hours in any one day. In these circumstances, it is extremely unlikely that owners would arrange to work all the protected classes of operatives in shifts, merely in order to run the mill for half-an-hour longer each day. The loss of production and wastage due to two stoppages in 12½ hours actual running, as against one stoppage in a 12-hour day, would far outweigh any advantages that the former system might otherwise offer.

51. There will, besides, be a strong inducement to owners to adopt a 12-hour day if, as we propose, any millowner declaring for an absolute 12-hour day is relieved of the necessity of having the "young persons" employed in his mill certified for age or registered. We also rely to some extent upon the probable views and wishes of the workers in respect of this matter. With a 12-hour day, the women and children could go to the mill in the morning, with their male relatives; and all the members of a family—except the children on the morning shift—could return together in the evening. In addition to these reasons, we also attach considerable importance to the feeling which will, we consider, grow up among both owners and operatives in favour of an absolute 12-hour day. There is no doubt that a large number of mill-owners in Bombay are already anxious to revert to a 12-hour day, and we trust that our proposals will assist in crystallising that desire into an established custom.

Probable result of our proposals in jute mills.

52. In jute mills the immediate effect of our proposals will be to limit the running time from 5-30 A.M. to 7 P.M., as these mills cannot be worked without the assistance of the protected workers. The number of children, women, and "young persons" actually employed at present is about 50 or 60 *per cent.* of the whole staff; and the figure will of course be higher if the spinning and preparing departments only are considered. We trust that, as we anticipate in the case of cotton textile mills, the ultimate effect of our proposals may be the adoption of a 12-hour day in all jute mills; but we consider it improbable that this result will be attained at once. The complicated shift system which we have already described is in force in all jute mills, and is thoroughly understood by the workers; it is the practice in these mills to work at present within the permissible limits of time for the employment of women and children; and it appears probable that the existing system will be continued for some time, in order to obtain the maximum possible production. As we have already mentioned, however, no worker in the preparing and spinning departments of a jute mill is at present

employed for more than 11 hours on any one day. In the weaving department the formation of regular shifts, with definitely ascertained intervals, will become necessary, under the proposals which we intend to make, unless the compulsory intervals referred to in paragraph 86 are arranged for; and the probable effect of our recommendations as regards this class of workers will be to limit their actual working hours to $10\frac{1}{2}$ or 11 a day, consequent on the reduction in the running time of the mill from 15 to $13\frac{1}{2}$ hours. We consider it improbable that the looms will be run longer than the spinning and preparing departments, for reasons similar to those which we have already advanced while discussing the question as regards cotton textile mills; and we are disposed to think that owners will prefer to arrange for regular shifts in the weaving department, rather than stop the machinery after each period of six hours.

SECTION X.—*The effect on the production* per *operative in textile factories of working days of varying length, and the probable effect of a general 12-hour day.*

The effect of working days of varying length on production.

53. At the beginning of our enquiries, we were of opinion that it would probably be possible to obtain from a large number of textile factories accurate statements showing the effect on the production *per* operative of working days of varying length. The information which we have been able to collect on this subject is, however, of but little value; and a sufficient basis has not in general been given upon which to rest any definite conclusions. The conditions affecting production in Indian textile factories include so many factors, of which the length of the working day is only one, that it is quite impossible to base any opinion of a reliable character upon isolated statistics covering an indeterminate period, such as the majority of the mills have supplied. There is also the further complication that it is the custom, in many cotton mills, to employ a number of additional hands, roughly proportional to the increase in running time, when the mill changes its system and works for longer hours. This practice renders it impossible to obtain comparative figures of any value showing the effect of varying hours of work on the outturn of the operatives in such mills. After close examination of the statements dealing with this question, and of the evidence bearing on it, we have reluctantly come to the conclusion that the greater portion of the material supplied must be discarded as valueless for our purposes. The opinions given are of the most conflicting character, and they are in general based upon insufficient data, and upon a somewhat cursory examination of the question.

Available evidence bearing on the question.

54. The only evidence upon which we can rely is:—

(*a*) a statement, prepared from the records of three jute mills in Calcutta, giving the production statistics for two years when daylight working, and working for long hours by electric light, respectively, were resorted to; and

(*b*) the statements given, and the evidence recorded, as to production in the Buckingham Mills in Madras, the Cawnpore Cotton Mills and Elgin Mills in Cawnpore, and the Empress Mills in Nagpore.

Examination of this material.

55. The statement referred to at (*a*) above is reproduced as Appendix D. The conditions were normal only for the first three months of each year, and the number of operatives remained the same throughout the whole period. Confining the comparison to these months, it appears that a decrease in the working time led to a decrease, but not a proportionate decrease, in production. The actual figures are:—

	Decrease in working time.	Decrease in production.
Mill A	17·24 %	10·80 %
Mill B	17·24 %	5·95 %
Mill C	17·24 %	13·90 %
Average	17·24 %	10·44 %

It is important to remember that the reduction in the length of the working day was made by the owners in all three cases in order to suit their own convenience; the workers were not aware of the reasons which led to a reduction of the working hours; and they were not in a position to form any estimate as to the length of time for which reduced hours would be worked. In view of the experience gained as to this matter in European countries, it is obvious that it would be unfair to accept these results as representing the effect upon production which would probably be produced by reducing the hours of labour to the same extent, either permanently, or after explaining matters to the workers, and fixing a definite time limit for the experiment.

56. A statement is appended to the evidence of Mr. Simpson, of Messrs. Binny & Co., Madras, showing the effect upon production of a 10-hour day in the Buckingham Mills. It was intended to run the mill 10 hours a day only, for a fortnight; but after the expiry of a week the piece-workers asked that the old system of working daylight hours might be reverted to. The figures given show that, while the average production *per* hour in lbs. was 1,116 for yarn, and 1,114 for cloth, during the preceding month, and 1,089 and 1,019, respectively, for the succeeding days of the month in which the experiment was made, it amounted to 1,122 for yarn, and 1,116 for cloth, during the eight days for which the 10-hour day was worked. The increase in production *per* hour was from 2 to 4 *per cent.*, with a decrease in time of approximately 17 *per cent.* The duration of the experiment was, however, so short that very little reliance can be placed on these figures.

The Cawnpore Cotton Mill has adopted a 12-hour day since February 1907, after experimenting as to the most suitable working hours from an economic standpoint. Their experience is that in a 12-hour day they obtain as much production as they formerly did in a 13-hour day. In the opinion of the manager, the workers adapt themselves to the conditions under which they work; where the hours are short, they work

harder and better; where they are long, they dawdle over their work. There has been an increase of one-third of an ounce *per* spindle *per* day in the ring frames in the 12-hour day, as compared with the production in the 13-hour day, though this has been accompanied by a slight drop in the total production of the mules. The piece-workers earn as much in the 12-hour day as they did in the 13-hour day, rates having remained stationary. A statement as to the production of five pairs of mules in this mill, on which the attendance was most regular, is given in No. 96 of the inspection notes, and detailed enquiries which we have since made point to the conclusion that that statement may be accepted as a fair comparative representation of the work done. The gross outturn increased by approximately 8 *per cent.* in the shorter day, and the piece-work wages of the operatives rose in the same proportion. In this mill there is strong European supervision in all departments.

In the case of the Elgin Mills, Cawnpore, the management found that a 15-hour day led to bad work, great waste, and uneconomical working. They reduced the hours gradually to 12, and have been working 12 hours a day for the last eight years. Their experience is that the outturn and the piece-work wages are practically the same now as they were when long hours were worked. The piece-work rates have not been increased, but the earnings of the workers have remained practically stationary.

Mr. Bezanji Dadabhoy, manager of the Empress Mills, Nagpore, has appended to his written evidence certain statements showing the effect on production of working days of varying length. These statements show that, over a period of ten years, the production *per* spindle *per* hour is, on the average, higher the shorter the working day. The difference is not, however, large. The utility of the statistics is materially discounted by the fact that, as the mill works daylight hours only, the short and the long days occur at different seasons of the year, when the spinning conditions are not the same. It is difficult to determine the effect of this on production; but there can be little doubt that, had it been possible to make a comparison for the same period of the year, the difference in favour of the short hour day would have been greater.

57. This evidence points to the conclusion that the production *per* operative *per* hour rises to some extent when the length of the working day is reduced. It is improbable that this increase in the hourly production would ordinarily be sufficient to maintain the gross production at the same figure, if the hours of work were diminished to any material extent; but it is to be remembered that the statistics quoted were in some cases obtained under conditions which were certainly not favourable to any considerable increase in the energy or efficiency of the workers. In two cases only have we definite information as to the results of an experiment, carried out for a sufficiently long period, where the hours of work were deliberately reduced with a view to ascertaining the most suitable working day from an economic point of view. In both cases the results have been the same. It has been found that the 12-hour day is the most suitable, and that the gross

production in a 12-hour day exceeds or equals the production in a 15 or 13-hour day.

We do not desire to lay undue stress upon these results, as we are fully aware of the multiplicity of causes which prevent accurate comparisons being made between the conditions obtaining at different periods of time, or at different places; but we consider that they are entitled to considerable weight when an attempt is being made to forecast the probable effect of the general adoption of a 12-hour day. Our observations have satisfied us that the Indian operative is more adaptable than employers of labour in India have hitherto believed; and we incline to the opinion—though we readily admit that we cannot produce any satisfactory statistical evidence likely to convince others—that the general adoption of a 12-hour day in textile factories in India would not materially reduce the output below that at present obtained in 13 hours. Production would probably fall off at first to a considerable extent; but we believe that this would gradually be rectified, and that within a short time the production under a general 12-hour day would probably equal that now obtained by working for 13 or 13½ hours.

SECTION XI.—*The formation of a "young persons" class, and the restrictions to be placed upon their hours of work.*

Proposal to create a "young persons" class, and the reasons therefor.

58. The summary which we have given of the information collected regarding the hours of work in factories in India shows that young adults are at present frequently called upon to work for excessive hours. In many cases obviously immature adults have been worked for as much as 15 hours a day; and we are satisfied that employment for such excessive hours must necessarily impair the physique, and stunt the development, of this class of workers. As Lieutenant-Colonel Mactaggart has noted, "young persons between 14 and 18 are just those who are likely to suffer permanently from the effects of overwork, even for a limited period. They are also the persons most likely to be driven to working for longer hours than they wish to work, and in any case they are, owing to want of experience, incapable of judging what is good for them." We agree with these views; and consider that, in the present conditions of employment in India, as disclosed in this report, it would be in the highest degree inadvisable to permit the unrestricted liberty which immature adults now enjoy in determining the duration of their hours of labour to continue. It is, we consider, the duty of the State to step in and protect a class which, as experience has shown, is unable to protect itself effectively; and we are convinced that nothing short of a hard and fast limitation of their working hours will suffice. We propose that the new class should include all workers from 14 to 17 years of age, and consider that their total actual working hours should be limited to 12 in any one day. The Hon'ble Mr. Vithaldas Damodher Thackersey differs from the rest of the Commission as to the hour limit, and thinks that the actual working hours of young persons should be limited to 12½, and of children (paragraph 63) to 6½ hours, a day.

59. The question of the formation of a class of "young persons" has been discussed by the Textile Factory Labour Committee of 1906, and by the Indian Factory Commission of 1890. Sir Hamilton Freer-Smith's Committee objected to the proposal mainly on the ground that it would occasion serious administrative inconvenience in actual working; the Indian Factory Commission of 1890, which was presided over by Surgeon-Major Lethbridge, Inspector-General of Jails in Bengal, was opposed to the creation of a class intermediate between children and full-time workers, on the ground that the members of such a class would be squeezed out of industrial employment if their hours "were restricted by law to any period between full-time and half-time work." In the alternative the Commission was of opinion that these operatives would in fact, and despite the provisions of the law on the subject, be employed either as children, or as adults. That Commission also considered it unnecessary to impose any restrictions as to hours of labour on persons over 14 years, as in India children of that age were frequently beginning to assume the responsibilities of family life. The majority of the witnesses examined by us were opposed to the formation of a "young persons" class, chiefly on the ground that it would occasion serious administrative inconvenience by introducing new complications, and by increasing the burden of responsibility which at present rests on managers. There is reason to believe, however, that the strength of the opposition to the proposal, as disclosed in the record of the evidence, is mainly due to the manner in which the suggestion was presented. The impression produced by the references to this matter in the papers sent to the witnesses apparently was that it was intended to create a class of workers, intermediate between children and adult male workers, fixing for this new class working hours which would not readily fit in with those of the other operatives. There was also the implication that it had become necessary to create such a class, owing to serious and habitual breaches of the law regarding the employment of children. Owners and managers were naturally unwilling to lend any support to such a charge by agreeing to the proposal; and they also dreaded the complicated restrictions regarding registration and medical examination which, on the analogy of the half-timer class, they doubtless assumed would be imposed. In many cases, when it was explained that the Commission did not contemplate the imposition of such restrictions if the factory affected were limited to a 12-hour day, and when it was made clear that the hours of work would fit in with those which we intended to propose for women and children, and with those which we hoped would ultimately be adopted generally for adult male workers, the opposition to the proposal was at once withdrawn.

Objections urged to the "young persons" class.

60. The objections which have been taken on the ground of administrative inconvenience to the creation of a "young persons" class will, we consider, be met to a large extent by the suggestion which we now make. We propose to exempt all factories which undertake to work for not more than 12 hours in each day from the necessity

Replies to these objections.

for registering their "young persons" and of having them certified for age. A factory accepting this concession will render itself liable for employing *any* of its operatives over 12 hours, as if they were "young persons"; but exceptions will be made in favour of the few adults employed in the boiler-house, engine-room, calendering, and other departments who have ordinarily, or occasionally, to come earlier or stay later than the main body of workers. We consider that the concession is one which can safely be offered to factories working not more than 12 hours a day, and also that it will be some inducement to adopt a 12-hour day.

The administrative objections to our proposal will be still further minimised by the adoption of the suggestion that children, who have worked as half-timers, should be permitted to enter the "young persons" class without further medical examination, when the medical certificates obtained by them prior to their admission as half-timers show that they have attained the age of 14 years. In the great majority of cases there will therefore be no medical examination for age prior to admission to the "young persons" class. We also propose that no examination for physical fitness should in any case be made as regards "young persons." As has already been stated, the physique of this class is, on the whole, satisfactory; out of over 1,000 "young persons" specially selected for examination, less than $2\frac{1}{2}$ *per cent.* were considered physically unfit, apart from age; and, as we have explained, the young adults specially selected for examination were picked out from the main body of workers either on account of their apparent youth, or because of their stunted or weakly appearance. In these circumstances, it is apparent that the percentage of children over 14 years of age who are physically unfit to work a 12-hour day must be practically negligible. In view of this fact, and of the practical difficulty of arranging for the medical examination of so large a body of workers, we are of opinion that no examination for physical fitness need be required prior to the employment of "young persons."

The other objection which has been advanced against the proposal to form a "young persons" class is, in our opinion, met by the definition which we propose to give of that class, and by the nature of the restrictions which we suggest as to their employment. It is obvious that a class of operatives working double the hours proposed for children, the same hours as women, and the same hours as the great majority of adults, will not be liable to be squeezed out of the ranks of industrial workers.

61. We have, after careful consideration of the question, decided to advise that all workers from 14 to 17 years of age should be included within the "young persons" class. This decision is based upon the observations made during the course of our tour, when thousands of boys between the ages of 14 and 17 were observed, and nearly two thousand were minutely inspected. We regret that we are unable to agree with the conclusion arrived at by the Indian Factory Commission of 1890, that "Indian boys of 14 are, in the majority of instances, either married or about to be married, and begin to assume the responsibilities of family life." When we began our investigations, we shared

that opinion; it soon became apparent, however, that it was not in accord with the facts, at least in so far as factory operatives as a class are concerned. A thorough physical examination of large numbers of these immature adults was made by us, and we are satisfied that the nubile age of males of this class is considerably higher than the Commission of 1890 assumed. The limits of age which we propose are, in our opinion, suitable. We would point out that one of the main objections taken by the members of the 1890 Commission to any increase in the age limit above 14 years—the objection that "young persons" over that age would either be deprived of employment altogether, or forced to work as half-timers on half pay—is met by the fact that the class of "young persons" which we propose to create will, in the great majority of cases, work the same time as the adult males, and double the working time of the children. We have already explained that there is a special demand for this class of workers in all textile factories; and we see no reason to believe that the restrictions which we propose to place upon their employment will result in any reduction of the wages which they now earn.

SECTION XII.—*Children or half-timers; the age limits to be fixed; and the hours of work to be permitted.*

Age limits for employment of children to remain unaltered.

62. Agreeing in this respect with the great majority of the witnesses examined, we consider that the present age limits for the employment of children need not be altered. Although it is clear that the strain of the present working hours has affected children more severely than any other class, we consider that the proper remedy is to reduce the number of working hours, rather than to increase the age limit. It has repeatedly been pointed out that parents in India desire their children to become wage-earners at the earliest possible moment; there is no question of conscious cruelty, but children are in fact made to work as soon as they are capable of earning even the smallest addition to the family income. In these circumstances, if the minimum age limit for the employment of children in factories were increased, it is inevitable that they would merely be forced to perform other, and probably more laborious, work until they had attained the age qualifying them for factory employment. We see no reason to suggest any alteration in the upper limit of age for half-timers; under our proposals children will, after reaching the age of 14, be protected from the consequences of excessive work until they attain the age of 17 years.

Reduction proposed in their working hours.

63. In view of the results of our investigations as to the physical condition of half-time children employed in factories, we are strongly of opinion that it is necessary to reduce the severe strain under which they at present work. We have explained our reasons for rejecting the suggestion to increase the age limit of this class, and the only practicable alternative which will secure our object is to reduce the number of hours for which they are now permitted to work. It is frequently stated that the children in a textile factory are not

worked hard; that they enjoy numerous intervals of rest; that the work required of them is light and intermittent in character; and that they are not subjected to a strain comparable with that borne by the other workers. We do not entirely agree with these views. In all textile factories it is essential that the doffing should be done as quickly as possible; and the children undoubtedly work hard at each doff. Further, it is naturally the aim of the factory manager to arrange matters so that the children are employed as continuously as possible on doffing work; and, though they are usually alert enough to circumvent these intentions to some extent, yet the work is undoubtedly much more constant than has been supposed. In jute mills the doffing work is very hard while it lasts; all the apparatus dealt with is heavier than in cotton spinning; and the children are urged to the utmost speed, as the spindles fill very quickly, and doffing is much more continuous than in a cotton mill. The doffers in the jute mills work with wonderful rapidity. In cotton mills, though the work is neither so hard nor so continuous as in jute factories, the children work in rooms full of noisy machinery, sometimes badly ventilated, and frequently excessively hot. In our opinion there can be no question that the children employed in textile factories are subjected to a severe strain during their working hours; and we were specially struck with the tired and listless look of the children in factories which we visited at the close of hot working days. In view of the experience which our investigations have enabled us to acquire as to the general physical condition of the half-time operatives, we are of opinion that children over 9 and under 14 years of age should not be permitted to work on any one day for more than 6 hours. In suggesting this period, we have borne in mind the absolute necessity of proposing a limit of time which will fit in with the other limits which we propose as regards the hours of work of "young persons" and women, and with our reasonable anticipations as to the probable hours of employment of adult males. This point, the vital importance of which was strongly emphasised by the Factory Commission of 1890, has not hitherto always been kept in view; but in all cases where it has been lost sight of, the limitations which ignored it have, as a matter of actual practice, been disregarded. The scheme which we propose is not open to that objection. We anticipate that, if our suggestions be adopted, the great majority of textile cotton mills will work a 12-hour day; male adults, women, and "young persons" will then be employed during the whole running time of the mill, while the children will in the majority of cases work continuously for half that period, the sets changing about noon. The present limit of seven hours' work for children was fixed mainly in consideration of the fact that, as all factories worked daylight hours, the maximum working time could not exceed 13½ hours a day; the limit for children was therefore fixed at half that period, allowing one quarter of an hour's margin in order to cover all possible cases. It was not anticipated, however, that children would be worked, on the average, for more than 6 hours a day throughout the year, or for more than 6¾ hours, as a maximum, during any one day, even in the hot weather season. The alteration which we now propose in the legal working

hours of children will give effect to the intentions of the Commission of 1890; and we trust that the administrative arrangements which we propose will be sufficient to secure that the new limit is not evaded or ignored, as the present limitation has been.

SECTION XIII.—*The restrictions to be placed upon the working hours of women.*

64. In a previous portion of this report, we have pointed out that, as the restrictions at present imposed on the employment of women are suited neither to the operatives themselves, nor to their employers, they have been ignored in practice. We have also expressed the opinion that the general physical condition of the female operatives in the various factories visited was uniformly excellent. In these circumstances, and in view of the advantages which would follow from the adoption of this course, we consider that it would be advisable to allow women to work for the same hours as "young persons," *i.e.*, for not more than 12 hours in any one day, with at least one interval during the day. We are satisfied, from our own observations and from the evidence of the medical witnesses examined on the point, that women can work these hours without danger of injury to their health. Lieutenant-Colonel Mactaggart expresses the same opinion as the result of his inspections throughout the Bombay Presidency. The change which we suggest will, if it be adopted in actual practice, tend materially to simplify the organisation of work in most factories employing women; while, if the new conditions should prove distasteful to them, they will still be able to obtain employment in the reeling and winding departments in textile mills, where practically all female workers not engaged in seasonal factories are at present employed. The work there is entirely piece-work; and the women would still be able to come and go freely, as at present. Women can now work for 11 hours, with an interval of 1½ hours, making the total period of employment 12½ hours *per* day; this total period will not necessarily be extended under our proposals. The alternative which we suggest will open a new avenue of employment to women; and, if we may judge from the remarks recorded on this subject by the Indian Factory Commission of 1890, and from our own observations, the measure will be popular with the operatives themselves, and will enable them to recover the position which they held prior to the introduction of the present limitations on their hours of work. Doubts have been expressed as to whether women would in any case work in the preparation, spinning, or weaving departments of a mill alongside male workers; and it has been stated that their form of garment renders their employment in those departments difficult or impossible. Two of the members of the Commission, who have visited Pondicherry, inform us that in the mills there, where women are permitted to work the same hours as the men, a large number are employed on the ring frames: these women work about 12 hours daily throughout the year, and are a robust, healthy-looking lot. Prior to the introduction of the present restrictions, women were also employed to a large extent in the spinning departments of the

Ahmedabad mills. If the removal of these restrictions should lead to the employment of women to a larger extent in textile factories, that will assist in relieving the present scarcity of labour. It will also bind down employers of labour in these factories more closely to the acceptance of a general 12-hour day. It is, however, essential to the success of our proposals that the working hours for women should be identical in all respects with those fixed for "young persons," and that the same intervals of rest should be prescribed. If any divergence be permitted, it would become difficult or impossible to arrange for the employment of women in the departments in which children, "young persons," and adult males are working; and, as formerly happened, they would in practice be excluded from these departments of the factory.

SECTION XIV.—*The limits of time within which "young persons," women, and children should be allowed to work.*

Time limits to be imposed upon the total working period of all protected workers.

65. Women and children are, under the present law, permitted to work between the hours of 5 A.M and 8 P.M. : in the case of women these time limits may be disregarded if a system of employment by shifts is in force, and the arrangements for the working of these shifts are approved by the local inspector. The effect of these provisions upon the operatives is seen most clearly in the case of the Calcutta jute mills. About half the children are required to be at the mill by 5 A.M., and they have frequently to walk two or three miles before arriving there. The following facts were ascertained by us on our visit to a certain jute mill near Calcutta, and are quoted from our inspection notes :—

> "The operatives are mostly Bengalis living in surrounding villages up to 3 or 4 miles off. The first warning whistle is blown at 3 A.M. Enquiry showed that a half-timer, a child of not more than 7 years, selected by the Commission at random, had to leave his home every morning at 4 A.M. and walk 2 miles to the mill."

Children employed in the set which begins work at 5 A.M. are generally free to leave the mill at 3 or 3-30 P.M. ; while those employed in the set which works till 8 P.M., the closing hour of the mill, are obliged to attend at 9 A.M. The children therefore must remain in the mill for 10 or 11 hours each day ; and they have either to be up very early in the morning, or to remain up till a comparatively late hour at night. The evidence of the workers examined, and the opinions given by the various managers consulted on this subject, show clearly that the necessity for coming to the mill so early as 5 A.M. is regarded by all the workers, adult males, women and children alike, as a serious hardship ; and it appears probable that the early start is responsible to a considerable extent for the shortage of labour. The hardships experienced under this system are intensified in some cases owing to the fact that the children and women not infrequently remain in the mill until such time as they can be accompanied to their homes by their male relatives. Popular feeling is strongly against the practice of allowing women to go out alone during the hours of darkness, and in many cases a woman may be compelled to defer her departure from the mill for an hour or two, till her husband or some relative can

accompany her. The period of absence from home may in this manner be extended by one or two hours, while from half an hour to three-quarters of an hour may be spent in walking home from the mill. In this manner the total period of absence may extend to 14 or 14½ hours in the case of children, and possibly to a longer period for some women. We are satisfied that, under the conditions prevailing in India, these long absences from their residences must be detrimental to the health of women, "young persons," and children. The children cannot be properly fed if they or their mothers remain absent from home for 14 hours or so each day; and the strain of the work in the mill must necessarily tell on them more severely if they are obliged to remain in the mill compound for some hours after their legitimate work has been finished.

66. For these reasons we consider that no woman, "young person," or child should be permitted to work except between the hours of 5-30 A.M. and 7 P.M., local mean time. This limitation will, we consider, be effective in checking to a considerable extent the abuses which exist at present owing to the employment of women and children at hours which are not only extremely inconvenient to them, but also injurious to their health. It will protect to some extent all women operatives who have household duties to perform, and will thereby tend to promote the general health of the whole body of workers. And it will also, we anticipate, render work in textile factories more attractive to the protected persons, and so increase the supply of labour. The 1½ hours over and above the 12 hours of actual employment leaves an ample margin for the longest intervals of rest likely to be given in any factory.

67. As an exception to this general rule, we propose that all women and "young persons" employed in *cotton ginning factories* should be permitted to work for 12 hours without any limitation as to the period within which they can be employed. We have already explained the system in force in these factories, the short duration of the busy season, and the character of the employment which they offer. Men are seldom employed on gins; the work is so light that women are peculiarly fitted to undertake it; and, as it has now come to be regarded as a woman's work, difficulty would probably be experienced in getting men to undertake it. The majority of the witnesses examined on this point were of opinion that, if women were prohibited from working on gins at night, it would be difficult, and in some cases impossible, to obtain male labourers to take their place. It is also certain that any such prohibition would not only increase the cost of ginning, but would also diminish the opportunities of employment offered to women. We have pointed out, in a previous section of the report, that ginning factories afford a considerable number of women employment suited to their strength, at a time when these women would find difficulty in obtaining work at their ordinary avocations; and we are opposed to any measure which would withdraw from this class of poor people a congenial and fairly well paid employment. The objections ordinarily advanced to the employment of women at night do not apply with much force to the

case now under discussion. The majority of the women employed in ginning factories are past middle age; and they work, seated, in one room, where male workers only come occasionally. No children are employed inside ginning factories, and infants are very seldom seen there. The physical disadvantages to the younger generation, and the moral objections as regards the employment of the women themselves, are therefore very much less than in the case of any other form of factory labour.

68. We also think that the Imperial Government should have power to permit, in exceptional cases, the employment of "young persons" at night, provided always that they are not employed for more than 12 hours out of the 24. It has never been the practice in Indian textile factories to work day and night with two shifts, as in China and Japan. But it is within the range of possibility that the trade might find it necessary to adopt all-night working in self-defence against foreign competition; and the contingency, remote though it appears to be, ought to be provided for. We would not, however, extend the concession to the employment of either women or children at night.

69. We have proposed that the hours within which it will be permissible to employ women, "young persons," and children in ordinary factories should be fixed at 5-30 A.M. and 7 P.M., *local mean time*. It is evident that if Indian standard time were recognised for the purpose of this provision, there would be wide variations in the actual time of starting and stopping work at different places; for instance, mills at Karachi would start work 90 minutes earlier in the day than those in Calcutta. It will therefore be necessary for each Local Government to fix once for all, for each industrial centre where local time is not officially recognized, the equivalent of 5-30 A.M. and 7 P.M. local mean time in terms of Indian standard time, to the nearest quarter of an hour; we do not recommend a closer approximation. We do not consider that any difficulty will be experienced in giving effect to this in practice.

SECTION XV.—*The arrangements to be made for half-timers' sets.*

The arrangements for half-timers' sets.

70. The system upon which children are employed at present varies from factory to factory; in some it is the custom to employ the half-timers in morning and afternoon sets for the full period of seven hours continuously, or with an interval of half an hour only; in others the children are employed on what we call the "split set" system, that is, they work for about half the total time in the morning, and then, after an interval of three hours or so, complete the remaining portion of their seven hours in the afternoon. We have already explained how the latter system lends itself to the evasion of the law. It undoubtedly facilitates the working of children in the same mill for hours far in excess of the legal limit, and for this reason we should have preferred if the system could have been entirely prohibited. But it is actually in force at present in some cotton mills, and in practically all jute mills. We have discussed its working in the former case; in the latter it is

thoroughly understood by the children, and, except in one particular to which we have already referred, it is carried out in a satisfactory manner. The absolute prohibition of the system would practically force jute mills to employ a much larger staff of children, some of whom would work for less than 6 hours a day. We are of opinion, therefore, that the system cannot be entirely disallowed, and recommend that it be permitted subject to the modification explained in the succeeding paragraph.

71. We are satisfied that the reasonable requirements of all the factories concerned would be met by an arrangement under which children could be employed either continuously for 6 hours, or in broken periods not exceeding 6 hours in all, provided always that the total period of employment was comprised within 8½ consecutive hours. This limitation would not interfere with the working of jute mills, and would enable cotton mills adopting the "split set" system to retain it, with slight modifications. Under our proposal, no child need remain on the mill premises for more than 8½ hours in any one day. It is also probable that the opportunity which the system affords of giving an interval of two hours during the period of the child's employment might be utilized by some mills in order to prevent the children from obtaining employment for the second half of the day at another factory. Further, the system could probably be worked so as to give the children an interval of about two hours in which to attend school.

Definition of shifts.

72. Except as regards ginning factories, where the conditions are peculiar and will be discussed in a succeeding section of the report, we consider that all shifts of workers or sets of children must be definitely fixed as regards the hours of work, and the allocation of the workers to definite shifts or sets, before they can be recognized as shifts or sets for the purposes of the law. Unless this condition be insisted upon, it will be impossible in the case of large factories to control effectively the hours of work of any class of operatives, or to detect or punish evasions of the law.

Section XVI.—*The certification of children for age and physical fitness.*

The certification of children for age and fitness.

73. The employment of children under nine years of age in factories constitutes one of the most serious abuses which we have discovered. The preceding sections of the report deal fully with this matter, and show the extent to which the practice of employing under-age children obtains. We are strongly of opinion that this wide-spread abuse cannot be effectually prevented unless a hard and fast rule be laid down that no child shall be permitted to work in any factory unless certified to be not under the age of nine years. We are also convinced, as a result of the observations regarding the general health and physique of child workers, which have been dealt with in a preceding section of this report, that an examination for physical fitness is necessary prior to permitting a child to undertake factory work.

Arrangements for procuring certificates.

74. The certificate of age and physical fitness should be obtained from a certifying surgeon appointed for this purpose. Each certifying surgeon should have a fixed office at which he would attend daily, at a stated hour, to examine any persons applying for certificates. He would also visit each mill as often as possible to grant certificates to children assembled there for examination. But besides this, to expedite certification at the mills, the certifying surgeon for each centre should be authorized to approve of any medical practitioner as a *provisional* certifying authority, if he is of opinion that that practitioner can be trusted to carry out the work properly, and that he possesses qualifications sufficient to enable him to pronounce accurate opinions as to the physical fitness and age of children. Provisional certificates should remain in force only until the first visit of the certifying surgeon to the mill in which the child works. In all cases, the provisional certificates granted should be countersigned by the certifying surgeon, after a personal examination of the children at the mill; and if the certifying surgeon refuses to countersign any certificate, the child to whom that certificate was granted should be debarred from working in a factory until a proper certificate of age and fitness has been obtained. We consider that it would be an unnecessary refinement, and that it would occasion serious practical difficulties, to limit the certificates of physical fitness to particular occupations, or to individual factories. The certifying surgeons, where they are appointed solely for this purpose, should in all cases be paid entirely by the Government; they should not be permitted to undertake private practice; and they should be prohibited from receiving any remuneration, direct or indirect, from factory-owners. Where it is impracticable to appoint a special officer solely for this work, it should be undertaken by the Civil Surgeon of the district, or by such other medical officer as the Local Government may appoint. In such cases the certifying surgeon should not be permitted to accept any remuneration from the factory-owners, direct or indirect, in respect of his certifying work. He should be paid for that solely by the Government.

75. We consider that all inconvenience to factory-owners in respect of delay in certification will be obviated by the provision which recognizes the provisional certificate of any approved medical practitioner. The majority of the large mills employ their own medical officers, who attend regularly at the mill each day. In cases where the medical officer of the mill was, in the opinion of the certifying surgeon, a suitable person to whom to entrust the duty of certifying the children provisionally, all candidates for employment could be examined by him each day at the mill. In other cases, it will generally be practicable for the mill-owners to arrange for the attendance of an approved medical man, at times convenient to themselves. We consider that, as regards the larger factories in India, which are situated at four or five industrial centres, it will be possible to arrange matters so that the certifying surgeon will visit each mill once in every seven days. The provisional certificates will, however, remain valid for the period between the certifying surgeon's

visits, in all cases. All provisional certificates granted will be scrutinized by the certifying surgeon, who will re-examine the children; and in this manner an effective check will be maintained over the proceedings of the provisional certifying officers. As the certifying surgeon should have the power to revoke any authority granted to sign these certificates, it is improbable that the system we propose will be abused.

Certificates to be carried by children.

76. We consider that it would greatly facilitate inspection if the certificates of age granted to children were carried by them while at work. At Ahmedabad, and some other places in the Bombay Presidency, the children kept their certificates in small tin cases hung round their necks, and under this arrangement we found that they could be identified with ease and certainty. We would strongly recommend the general adoption of this system, although we do not see our way to prescribe it as a compulsory measure.

Proposal to abolish payment of fees for certificates.

77. We are strongly of opinion that the certifying surgeons solely appointed for this work should receive no remuneration, direct or indirect, from factory-owners. We cannot approve of a system tending to create any bias, however small, in favour of arranging matters in a manner acceptable to millowners. In the case of certifying surgeons not specially appointed for the purpose of certifying children for factory employment, we should have preferred a system under which these officers also would have been absolutely independent of factory-owners. That is, however, impracticable in cases where the certifying surgeon is, as he usually will be, the Civil Surgeon of the district; but even in such cases we are strongly of opinion that no fees for certifying work should be paid to him by employers of labour. We consider that the certifying of children for factory employment should be regarded as one of the ordinary administrative functions of Government; and that, as such, it should be paid for by the Government itself, the 4-anna fee at present charged for each certificate being abolished. Children coming for employment for the first time often have not got the 4 annas to pay, and in such cases there is either delay, or the mill pays the fee and keeps the certificate. The abolition of the fee will simplify matters much, and be received as a welcome concession at a time when the certification of all children is going to be strictly enforced. In any case the certificate should always be considered the absolute property of the child. The question of compensating medical officers for the loss which they would in certain cases sustain under such an arrangement will, we presume, be considered by the Government.

Section XVII.—*The application of the Act to ginning and other seasonal factories.*

Proposal to apply the Act to all seasonal factories.

78. Under section 2 of the Indian Factories Act, all factories which work for "less than four months in the whole in any one year" are excluded from its

scope. No definite test period is, however, prescribed; and in consequence different views have been held as to the operation of the words quoted. On the one hand it is contended that, if the factory works for less than 120 days in any one year, it does not come under the Act for that year, and it also remains exempt from the Act until it can be proved to have worked for a longer period, in which case it again becomes subject to the provisions of the Act, but not with retrospective effect. On the other hand it is urged that, if a factory has once come under the Act, it must be presumed that it is likely to work for more than four months in the year until the contrary has been clearly demonstrated; and the factory must remain under the Act until satisfactory evidence covering a reasonable number of years, and warranting its exclusion, has been produced. Difficulties have also been experienced as regards the position of seasonal factories opened for the first time. In such cases there is no evidence either in favour of inclusion or exclusion; and the factory usually works unrestrictedly until definite evidence is obtainable, showing that it has in fact come within the scope of the Act. It is obvious, however, that in all such cases, and in the case of factories excluded from the scope of the Act because they have been shown to have worked for less than four months in one year, the factory will have unrestricted liberty as regards practically the whole of one season's work at least, even if, during that season, it does in fact work for more than four months. These difficulties in the interpretation of the present Act, and inequalities in its operation, occasion considerable trouble to Government officials and to factory-owners. Further, there are obvious objections to having two factories of a similar character, side by side, working precisely the same hours and for the same period, of which one is under the Act, and subject to all the limitations which the Act imposes, while the other is entirely unrestricted.

79. As a result of our investigations, we consider that the seasonal factories which are at present excluded from the Act solely on the ground that they do not work for more than four months in any one year should be made subject to its provisions. These factories are, in general, cotton ginning factories, and they are usually constructed upon the cheapest possible lines. Gins are often erected in poorly constructed buildings; the floor upon which they are supported is frequently so badly constructed that it vibrates to an excessive extent; the machinery and boilers are sometimes bought second-hand; and the management is in many cases unsatisfactory and inefficient. The risk of accident, and the probability of serious abuses being practised, are much greater in such factories than in larger concerns. Their complete freedom from control is also prejudicial to the interests of the larger and better managed factories where sound machinery is used, adequate supervision maintained, and the provisions of the Act are generally observed. We consider it unnecessary to elaborate the arguments in favour of the proposal that the limitation of the scope of the Act to factories working for not less than four months in the year should be abolished, as this amendment of the law was accepted by the Government of India in 1905, after consulting all the Local Governments on

the subject. It will be sufficient to say that the present limitation is indefinite, and difficult to work in practice; that it excludes from all control a class of factories where abuses are peculiarly liable to occur; and that our investigations enable us to say positively that the withdrawal of this limitation will inflict no appreciable hardship upon any industry.

Employment of women at night, and arrangement of shifts in ginning factories.

80. We recommend, however, that the proposals which we have made as regards factories generally should be modified in two respects as regards cotton ginning factories. In the first place, we consider that women and "young persons" should be allowed to work in gins at night. They should, we consider, be allowed to work, by day or by night, for not more than 12 hours out of the 24. We have already given our reasons for this recommendation. In the second place, we propose that in the case of ginning factories running for more than 12 hours a day it should be considered a sufficient compliance with the law limiting the hours of work of women and "young persons" to 12 in any one day if additional workers are employed to the extent necessary to reduce the hours of work of each woman or "young person" to not more than 12 hours, assuming that the work, during the total period for which the factory runs, is uniformly distributed among all the workers. For example, if a factory with 20 gins, for which 20 women would be required for work on the gins, runs for 16 hours, it would be accepted as a sufficient compliance with the law if $\frac{20 \times 16}{12}$, or 27 women, were actually engaged for work on the gins only. We are of opinion that it would be difficult, and possibly impracticable, to attempt to enforce a definite shift system in such cases. The majority of the ginning factories are small concerns which cannot bear the cost of highly skilled management, and the arrangement of definite, ascertained shifts in such cases would probably be beyond the abilities of the staff. The workers are not accustomed to the shift system, and would not readily understand it; on the other hand, the method of obtaining relief by employing a number of additional workers is familiar to them, and there is no reason to think that it would not in actual practice secure the object aimed at—the restriction of the hours of work of women and "young persons" to not more than 12 on any one day. There is the further point that the system which we propose to allow in this case is not open to the objections which render its adoption absolutely impracticable in larger factories. The ordinary ginning factory is in a small building of one room, and employs only from 50 to 100 hands: in these circumstances inspection is always easy. The system which we propose to sanction has been working in a satisfactory manner in Khandesh for years. Experience there has shown that it is effective and practicable; and in these circumstances we see no reason for refusing to recommend its general adoption in similar cases elsewhere, even although the proposal is open to certain obvious theoretical objections.

The Sunday holiday in ginning factories.

81. A large number of the witnesses examined have suggested that it would materially assist the ginning industry if the factories

were exempted from the necessity of granting the Sunday holiday. The work comes in in rushes; and it is often very inconvenient to close down on Sunday. They would prefer an arrangement under which the factories could close on any four days in the month selected by them. This would admit of cleaning the boilers, overhauling the machinery, and effecting general repairs, without encroaching on the short period available for ginning each year's crop. It appears, however, that the Local Governments have in certain similar cases taken action under section 5-B, sub-section (2), clause (c) of the Act; and in these circumstances we see no necessity to make any definite recommendation in respect of this matter. Any doubt which may at present be felt as to the applicability to such cases of the provision quoted will be removed if the wording which we suggest in the draft Bill appended to this report be adopted.

Outside labour in seasonal and other factories.

82. One point which primarily concerns seasonal factories, but which affects other factories also, remains to be noticed. In ginning factories it is the custom for the owners of the cotton sent for ginning to engage workers to stack it in the compound, and to pick it over there, in order to remove the "yellow stain." These workers have nothing to do with the ginning operations, they do not enter the factory proper, and they are in no way under the control of the owner of the factory. Similarly in rice mills the paddy is brought from the boats to the mill by coolies who are engaged solely for this work by the mill, or by a contractor, and who do not enter any portion of the factory where machinery is in operation. The Government of Burma has directed that such workers should not be regarded as within the scope of the Act, and we agree with that view. Although they may, technically speaking, be employed within a factory, their work is not factory work in the ordinary acceptation of that term; and there could be no justificaiton for bringing them within the scope of the Act while dock labourers or agricultural labourers, for example, remained outside its purview. For the same reasons, we consider that the class of workers we have already referred to, who are employed in the compounds of ginning factories, should be excluded from the scope of the Act. Cases of an analogous character occur in practically all factories, and we are of opinion that they should be similarly dealt with.

SECTION XVIII.—*The question of exempting mills working without artificial light from certain restrictions.*

Arguments in favour of a daylight working day.

83. A number of the witnesses examined by us were in favour of what is termed the "natural working day," that is, a day extending from dawn to dusk, and therefore varying in length according to the season of the year and the locality. Most of them were in favour of allowing mills fitted with electric light installations to work a fixed 12-hour day throughout the year, while mills not provided with installations would be allowed to work the natural day. They contended that it is the custom in India to work from dawn to dusk; that the mill hands throughout the country thoroughly understand the system, and that there is no evidence to show that it places

any undue strain on them. Throughout the year, the average length of the working day, under the daylight system, would be less than 12 hours, while in the hot weather the longest day would not exceed 14½ hours (13½ of actual work) in Northern India, or 13¾ hours (12¾ of actual work) in Bombay. It is urged that these hours cannot be considered as in any way excessive, considering the fact that the length of the actual working day in the cold weather would not ordinarily exceed 11 hours.

Objections to the proposal.

84. We have carefully considered this question, and are unable to agree with the arguments advanced. We consider that a system which renders it possible to keep the operatives in or about the mill for 14½ hours, and actually at work for 13½ hours, during the hottest period of the year, and which precludes them from enjoying a single hour of daylight at their homes, throughout the year, except on prescribed holidays, stands self-condemned. The custom of *actually* working labourers for these long hours did not exist in India before textile factories were established. Further, under the system it would be necessary to permit "young persons" to work for the full running time of the mill, while children would be required to work for half that period. We object strongly to any proposal which would admit of children and "young persons" being worked for more than 6 and 12 hours, respectively; the children employed in factories are, as a rule, weakly and of poor physique, and we are deliberately of opinion that it would be wrong to impose on them this extra strain at the hottest time of year. We also believe that, so long as daylight hours are worked, little improvement can be expected either in the habits of the workers, or in their efficiency. The hot weather days are so long, and the climatic and other conditions are then so trying, that the operatives naturally dawdle as much as possible over their work; and the habits which these conditions induce and intensify are so much in accord with the natural inclinations of the workers that the tendency is to continue these leisurely methods throughout the year. Another objection to which we attach great importance is that, under the arrangements proposed, it would be possible for many of the operatives to work very long hours during the hot weather, by daylight, and then to accept employment in the cold weather in mills working a fixed 12-hour day by electric light. Large numbers of operatives are always willing to work excessive hours, if they can thereby earn correspondingly higher wages. We are also opposed to the suggestion on administrative grounds; it would in our opinion be almost impossible to work the two systems side by side in the same place.

Examination of the Hon. Mr. Vithaldas' minute of dissent.

85. The Hon'ble Mr. Vithaldas Damodher Thackersey does not agree with our views in respect of this matter, and he has explained his position in a minute of dissent appended to this report.

We have already dealt in the preceding paragraph with some of his arguments; but, as the proposal is put forward mainly in the supposed interests of the manufacturers, without much regard to its

effect on the operatives, we consider it necessary to reply briefly to some of the specific contentions advanced in the minute.

In the first place, we would point out that the opinion of the Factory Commission of 1890 cannot be cited in support of the proposal, inasmuch as the possibility of working a fixed 12-hour day all the year round did not occur to them. Electric light was not introduced in Indian mills until about 1893; and the Commission were not, therefore, in a position to pronounce any opinion as to the relative advantages of the two systems now under discussion, or as to the advisability of permitting these systems to remain in force concurrently. Similar remarks apply to the reference which has been made to the debates in Council in 1891. The introduction of electric light into the mills has entirely altered the aspect of affairs since then; and the conditions have been further modified by the growth of the abuses which we have alluded to in the preceding sections of this report.

It is true that, as our colleague points out, several millowners and managers, who are strongly opposed to excessive hours of work, are nevertheless in favour of the daylight working day. The witnesses who have given evidence in this sense are in general owners or managers of mills not fitted with electric light; and there is reason to believe that their preference for the daylight working day is due, in a great measure, to the fact that they are suspicious and uneasy regarding the probable effects of the general introduction of electric light in mills. Ample grounds to justify this attitude are to be found in our report; but the proposals which we intend to make for improving the administration of the Act will be sufficient to prevent abuses similar to those which have occurred in the past from recurring, and will also afford satisfactory guarantees that the system of working by electric light will be freed from the excesses which have hitherto characterised it.

Mr. Vithaldas next contends that the operatives themselves would prefer daylight working hours to a fixed 12-hour day. The point is, in the last resort, one of individual opinion; but we do not agree that he has correctly represented the views of the majority of the operatives on this question. The President was present on all the occasions on which operatives were questioned regarding this matter while Mr. Vithaldas was not; and the impression left on his mind is that the operatives would prefer a 12-hour day. To the average mill-hand, working by electric light means long hours; and the opposition to long hours is so strong among the operatives that, when they were questioned, any reference to electric lighting was usually drowned in shouts of "We want no electric light." It was extremely difficult to get them to grasp the idea of a fixed 12-hour day all the year round; and more difficult still to get them to accept our assurances that under that system the electric light would be used only for two or three months in the cold weather. Most of them imagine that their only protection against the excessive working hours of the past lies in the entire abolition of electric lighting in mills, and it was in this sense that many of their replies were given.

The argument advanced by our colleague that the operatives will not be worked hard during the long days, as the spinning conditions are then favourable, does not appear to us valid. In the first place, the conditions favourable to spinning do not continue throughout the whole period during which long hours would be worked; in certain parts of the country these conditions do not obtain for more than two or three months. In the second place, as spinning is easy during the rainy months, owners can work on an inferior quality of cotton during that period. The practice is, we understand, common in Bombay; and this would usually counterbalance any advantage which the operatives would otherwise gain owing to the more favourable climatic conditions. Lastly, and most important, we cannot admit that the difference would, even in the most favourable circumstances, be sufficient to counteract the effects of the increased strain thrown on the operatives by the long hours of work during the hottest and most trying months of the year.

We have no information enabling us to chec kthe details of the calculation made regarding the number of mills in India fitted with electric light; but we understand that all mills in Native States have been included in the figures given by Mr. Vithaldas. As regards Southern India generally, the geographical situation is such as to secure what is practically an average 12-hour day, by natural light, throughout the year. Electric light would not be installed in such mills, unless with the deliberate intention of working excessive hours regularly. In Northern India all the mills have electric light. It is clear, therefore, that the question really narrows itself down to one affecting Bombay—the chief cotton centre in India. In Bombay there are 85 mills, and of these 60 at least are already fitted with electric light.

The contention that a refusal to permit factories to work "young persons" and children from dawn to dusk throughout the year would adversely effect industries other than the textile industry is founded upon a mistake in fact. It is true that non-textile factories almost invariably work by natural light; but it is equally true that, they do not, in most cases, avail themselves at present of the *full* period of daylight; and our observations have convinced us that the restrictions which we propose will not in any way adversely affect these factories.

Finally, there is a consensus of opinion that, over a whole year of, say, 310 working days, the gross production of a fixed 12-hour day would ultimately be more than that of a natural working day: this opinion is, we understand, held also by the Hon'ble Mr. Vithaldas. We consider that it would be an extremely short-sighted policy to abandon the best interests of both the trade and the operatives merely on account of some temporary inconvenience to a few mills.

SECTION XIX.—*Minor recommendations.*

Intervals of rest.

86. In the present Act, it is laid down that all factories, except those working on the shift system, must stop work for a full half hour between noon and two o'clock in the afternoon. In place of this we

propose that there shall in all cases be a stoppage of work for not less than half an hour, after not more than 6 hours continuous working. We suggest this amendment as we are convinced that, under the conditions prevailing in India, no operative should be required to work for more than 6 hours continuously. It is, we consider, preferable to place the matter directly upon this basis, rather than to trust as at present to the midday stoppage of work in order to secure that the operatives shall not be continuously employed for too long a period. Operatives have in the past been worked, and in some factories are at present being worked, continuously for 8½ hours without any fixed interval of rest. This ought not, in our opinion, to be permitted. There is another point in favour of the proposal. We find that in few of the textile factories in India is the midday interval used by the work people as their meal hour. Coming to work at daybreak without taking food, the operatives in most factories take their first meal between 8 a.m. and 10 a.m., and generally eat again between 2 p.m. and 4 p.m.; the midday interval is ordinarily spent in smoking, resting, or sleeping in or near the mill compound. We believe that the hands could in many places be kept much more steadily at work if they obtained, instead of the midday rest, one interval of half an hour between 8 a.m. and 10 a.m., and another between 2 p.m. and 4 p.m. This course has been suggested to us by several mill managers, and our proposal makes it possible for any factory to adopt it, while those who prefer to retain the midday stoppage can do so.

The Sunday holiday.

87. The intention of the existing Act was to make Sunday a close holiday for all factories, subject, however, to four provisions designed with the object of avoiding all inconvenience to factory owners. The first provision was intended to permit the supervising and mechanical staff to examine and repair machinery on a Sunday, without imposing on the owners the obligation to give a compensatory holiday in lieu thereof; the second admits of the factory as a whole, or of any individual in the factory, working on Sunday, if a compensatory holiday is given on one of the three days preceding or succeeding the Sunday; the third and fourth provisions enable the Local Governments and the Government of India, respectively, to exempt any factory or class of factories from the necessity for granting the Sunday holiday. As we have explained in paragraph 16 of this report, advantage has been taken of the somewhat wide terms adopted in the first proviso to bring in the whole body of workers, or a considerable proportion of them, to clean machinery on Sundays. In such cases no compensatory holiday is, in fact, given. It is, we think, clear that this practice should be stopped; and we consider that this can best be effected by adding to section 5 B, sub-section (2), clause (*a*) of the Act an explanation to the effect that periodical cleaning is not included in the terms "examining" or "repairing." The second proviso has also worked somewhat unsatisfactorily in practice, inasmuch as it is extremely difficult for an inspector to ascertain whether, when a portion of the ordinary staff is worked on Sunday, compensatory holidays are in fact given to them. As no notice of the intention to work on Sunday is required, and as Sunday working is permissible in anticipation of the grant of a holiday later on in the week, employers can, and do, work

their operatives on Sunday without granting any compensatory holiday, and they run but little risk of detection thereby. In order to prevent this, we recommend that previous notice should be required in all such cases. This will not occasion any inconvenience to factory owners, while it will enable the inspectors to satisfy themselves that the provisions of the law are in fact complied with.

88. Government already has power to exempt, by notification, any factory or class of factories from the necessity for giving a Sunday holiday. We think it would make the Act more complete, and save trouble, to specify in it, in addition, the classes of factories which we have ascertained must *always* be granted the exemption on account of the continuous processes carried on. These are breweries, distilleries, sugar refineries, mineral-oil refineries, ice factories, glass works, tanneries, cement and chemical works, and kilns connected with potteries.

Education.

89. We do not consider that factory owners should be compelled to provide elementary education for the children employed by them. We can see no reason why this particular obligation should be placed upon employers of factory labour only, and we know of no analogous provision in this country which could be cited in support of the proposal. Education is not compulsory in India; and the class from which the child workers employed in the factories are drawn does not, as a rule, take advantage of the educational facilities which are at present offered. Further, as we have already stated, we are most strongly opposed to the maintenance of schools within the factory enclosure. In many cases the mill school is used only in order to keep the children on the premises throughout the day, and they are forced to work—often for the full running hours of the factory—if the labour supply is short.

90. We feel strongly, however, that every facility and encouragement should be given to promote the education of children working in factories. The conditions under which these children live are necessarily such as to prevent them from availing themselves of educational facilities to the extent to which other children can; and in most cases it would be impracticable for the children, however willing they or their parents might be, to obtain any opportunity of attending school. It is hardly necessary to advance any arguments in favour of the suggestion that all possible facilities should be given for the education of this class; and we feel sure that in advocating this we shall command the sympathetic support of the employers of labour in India. The problem must, we consider, be attacked by the educational and local authorities, acting in concert; and we trust that the various Local Governments will bring all the influence which they can to bear in order to secure that the matter is adequately dealt with. The only solution of a practicable character appears to us to be an arrangement under which special schools for factory children would be opened at suitable centres, close to the factories; the course of instruction would have to be repeated twice each day, for the benefit of each set of half-timers, and the school hours would have to be fixed solely with reference to the working

hours of the children in the factories. Arrangements could doubtless be made under which it would be possible for the children to attend school for a maximum of two hours each day. We do not consider that a longer period would be advisable, in view of the facts that the children must necessarily be tired after their work in the factory, and that it is desirable to get them away from the factory, and the factory neighbourhood, at the earliest possible moment. These special schools would probably have to be financed by the local authorities concerned, but we feel confident that the factory owners for the education of whose workers these schools would be maintained would gladly assist in this matter by substantial voluntary contributions.

91. Further, in order to encourage the education of factory children, we propose that any child of 13 years of age, who can produce a certificate showing that he has passed such educational standard as each Local Government may fix from time to time, should be permitted to work as a "young person," if certified as physically fit to work 12 hours a day. This proposal is based on a similar concession given under the English factory law; though it may not be taken advantage of to any great extent at first, we believe that in time it may give some stimulus to education.

Presence of non-working children in factories.

92. The subject of the presence of non-working children in factories naturally falls under two heads:—(*i*) the presence of infants or children too young to be capable of doing work, and (*ii*) the presence of children under the legal working age, who could nevertheless be worked. We are of opinion that children under 6 years would generally fall within the former category, children over 6 years in the latter. As regards the former class—children under 6 years of age—we do not recommend that it should be made an offence to permit such children to remain in a factory. We are satisfied that every effort is at present made by employers to keep women from bringing young children into the factories; in some factories it has been found possible to stop this practice entirely, and we have everywhere found that mill managers do all they can to discourage it. But in a large number of cases it is quite impracticable to prevent it altogether. Many women who earn their livelihood by factory work must either bring their children with them to the factory, or leave them at home practically without care or supervision of any kind. The rooms in which women work are in general well lighted and well ventilated; and it is only in a few exceptional cases that the children who accompany their mothers could come to any harm. As a matter of fact, the information which we have been able to collect on this subject shows that there are extremely few accidents to young children in factories, and in these circumstances we do not think that a case has been made out in favour of an absolute prohibition of the practice. Any attempt to prescribe general rules governing the matter would, we think, fail, inasmuch as it is impossible to cover all the diversities which exist by a set of general rules. The only other alternative would be to leave the matter by law to the discretion of the local inspectors. We are reluctant to adopt that course, partly because

we think that the obligations to be imposed upon factory owners should be as uniform and definite as possible, and partly because we are not inclined, at the present stage, to confer absolute power upon the inspectors in respect of this matter. In all the circumstances, we are of opinion that no action need be taken by the Government to prevent the introduction of non-working children under the age of 6 years into factories.

93. In the case of non-working children over 6 years of age, the dangers to be guarded against are of a different kind. Our inquiries have shown that there is a great scarcity of child-workers in textile factories all over India, and also that under-age children of this class, accompanying their parents to factories, are frequently allowed to work as regular hands, or to help their parents. The inspectors find it almost impossible to prevent this. If an inspector appears, such children stop working, and say they were playing; and no conviction can be obtained unless it can be proved that the child was actually working. The presumption, amounting almost to certainty, is that any such child found in a mill would in fact be engaged as a regular worker; but proof which will satisfy the courts is often unobtainable, and in such cases the law is violated with impunity. In order to prevent this, and to facilitate the work of inspection, we recommend that any child over the age of 6 years, who is found within any room or other part of a factory where manufacturing processes or work incidental to manufacturing processes is carried on, should be deemed to be employed in that factory, unless the contrary can be proved. This provision will not, we are satisfied, occasion any practical inconvenience, while it will materially facilitate the work of inspection.

Fixation of a standard of purity for air in factories.

94. Our observations show that the ventilation in factories, other than cotton textile factories, is in general excellent, and no provisions regarding the purity of the air are required in such cases. In cotton textile factories the conditions in this respect vary widely; speaking generally, the newer mills are admirably ventilated, while the arrangements in the older mills are such that, though ventilating contrivances exist, they are not effective in actual practice. In order to obtain a comfortable degree of warmth in the cold weather, or in order to prevent threads snapping in the hot dry months, or when a dry breeze is blowing, it is the custom in most mills not fitted with modern ventilating arrangements to shut all the windows. In these circumstances the atmosphere of the work rooms soon becomes very vitiated; and it requires no demonstration that continued work in such foul air must necessarily be most injurious to the operatives. We would refer, in this connection, to our inspection notes on mills Nos. 3, 27, 28, and 29. As one witness of long practical experience stated, any man would feel exhausted even if he merely sat in a chair in some of the work rooms for eight or nine hours, the atmosphere was so foul. Others were of opinion that the vitiated air in the mills was largely responsible both for the careless habits of work of the operatives, and for their frequent absences from the work rooms. The conditions in some mills were, they considered, such as to preclude any display

of energy, and to necessitate frequent absences in order to obtain a breath of pure air. Our observations have convinced us that these statements are justified by the conditions obtaining in some cotton textile mills, and we are therefore of opinion that an attempt should be made to fix a standard of purity of air, in order that a reasonable amount of ventilation may be insisted on. Unless a standard of purity be fixed, it will be impossible for the inspectors to effect any improvement in respect of this matter. The standard should, as in England, be expressed in terms of the proportion of carbon dioxide present in the air, and power should be taken in the new Act authorising the Governor-General in Council to prescribe and enforce such a standard. The question of the standard actually to be fixed is one for chemical and medical experts; and we recommend that arrangements should now be made to conduct the experimental work necessary in order to arrive at a decision on this point. We do not consider that the standard adopted in England could be applied, without careful examination as to its suitability, to India.

Fixation of a standard of humidity.

95. Agreeing in this respect with practically every witness examined, we do not consider that any standard of humidity should be fixed for the air in textile mills in this country. The climatic conditions vary so widely over India that the fixation of any standard would, we are satisfied, be impossible in practice.

Fixation of a standard of purity for the water used for humidifying purposes.

96. The water used for humidifying purposes is, in general, taken from the municipal water-supply. In other cases it is usually drawn from sufficiently pure sources; but we have found several instances where the water used for this purpose was taken from stagnant, foul-smelling tanks, and was obviously most impure. We consider that it will be possible to rectify this, while at the same time imposing no burden upon the factories which have at present a supply of reasonably pure water, by requiring that in all cases where humidity of the air is produced by artificial means, the water used for the purpose must be taken either from a public supply of drinking water, or from some other source of supply ordinarily used for drinking purposes. If it is not obtained from such sources, then the water used must first be purified to the satisfaction of the inspector. This will cover all cases, even those of factories situated in the most isolated places.

Measures to be taken to protect the workers from inhaling dust or other impurities

97. We have found that in several classes of factories, more particularly cotton presses, rice-mills, flour mills, and paper mills, theamount of solid impurities in the atmosphere is so large as to cause serious danger to the health of the operatives. In many cases the dust was so bad that we could hardly enter the work-rooms. In some of the better managed factories mechanical appliances have been used which entirely obviate this danger, and there is no reason why such appliances should not be insisted on wherever they are needed. We recommend that power should be taken in the new Act to require the owner of any factory where dust or other impurities are likely to be inhaled by the workers, and where this could probably be prevented, to take such means

of a mechanical character as the inspector may direct in order to prevent such inhalation. The circumstances are, we think, such as to justify fully the application of this remedy. An appeal against any order of this nature passed by an inspector should, we think, lie to such authority as each Local Government may prescribe.

Latrine accommodation.

98. Throughout our tour, we directed special attention to the question of the adequacy of the ordinary scale of latrine accommodation, which is one seat for every 50 workers. We are satisfied that that scale is, in general, adequate. Men were seldom seen waiting outside the latrines, and no complaints were made as to the inadequacy of the accommodation provided. The scale is, however, inadequate in the case of the smaller factories where the number of workers does not exceed about 200. In order to provide for this, we recommend that the following scale should be prescribed for general adoption:—

up to 50 operatives	3 seats.
from 51 to 150 operatives	4 seats.
from 151 to 200 operatives	5 seats.

above this number......one seat for every 50, or fraction of 50.

Where latrines are provided on the septic-tank or water-carriage system, the scale might be reduced after the first 25 seats. We do not consider that the provision of separate urinal accommodation should be insisted on. The habits of the native in this respect are different from those of the European; and it has been found that urinals, where provided, have frequently not been used in the manner intended. The provision of separate urinal accommodation would, in general, probably be of but little benefit to the workers.

Fencing of machinery.

99. The arrangements for the fencing of machinery are, in the great majority of cases, excellent. We do not consider that any powers in excess of those conferred by the present Act are necessary as regards this matter.

The provision of fire exits.

100. In many factories no adequate provision is made for the escape of the operatives from the upper storeys in case of fire. There is frequently only one staircase to the upper storeys, which serves both as entrance and exit. These staircases are often narrow and steep; and it would be quite impossible in some factories we visited for even a moderately small number of men to escape quickly from the upper storeys of the building. Most factories in India with more than one storey are cotton factories; and, considering the danger of fires occurring there, and the rapidity with which they spread, we regard it as essential that adequate provision should be made for the egress of the workers in case of fire. We therefore recommend that every factory owner should be liable to be called upon to provide adequate facilities for this purpose; and that inspectors should be authorised to serve notices upon occupiers specifying the measures which they consider necessary

in order to effect this, and fixing a period within which these measures must be carried out. An appeal against any order of this nature passed by an inspector should, we think, lie to such authority as each Local Government may prescribe.

Hanging of doors in factories.

101. It has been suggested that all factory doors should be hung so as to open readily outwards. The question is not of much importance in India, as in most factories it is the custom to leave all doors wide open during working hours. We recognise, however, that it is a useful measure of precaution to require that all doors shall, except where sliding doors are used, be hung so as to open readily from the inside outwards; and we recommend that the doors of all rooms where more than 30 workers are at any time employed should, in factories the construction of which was not commenced before the passing of the new Act, be required to be hung in this manner. We do not consider it advisable to give retrospective effect to this provision; but we have no doubt that the majority of factory owners will, on their attention being called to the matter, voluntarily adopt this simple and inexpensive precaution against accidents.

Cotton openers.

102. Machines known as "openers" are used in cotton presses to clean the cotton, and also to mix the various qualities of cotton passed through the machine into one uniform grade. In some cases the machine is used primarily as a cleaner; in others the chief object is to mix the cotton. The opener is of simple construction: a cylinder fitted with projecting spikes of wood, or of iron covered with leather, is made to revolve at a very high speed within a small chamber, provided with a receiving opening at the top, and a delivery opening, extending for the whole length of the chamber, in front. The cotton is pushed by hand into the chamber at the top; catching in the spikes, it is swept round inside the chamber, and ejected with considerable violence from the opening in front. Clouds of dust rise from the cotton as it emerges, unless steam is used in the opener. The machine usually is of a very primitive type; and, as it is used at present, it is a constant source of danger to all the operatives in the press house. In the first place, the air is usually thick with dust beaten out of the cotton; in the second place, stones mixed with the raw cotton are occasionally hurled with great force from the opener among the operatives who work directly in front of it, removing the cotton as it falls; and, lastly, and most important, fires frequently occur owing to the presence of matches in the raw cotton, or to sparks caused by stones or similar bodies coming in contact with exposed portions of the metal work inside the opener. In such cases the fire is almost explosive in its violence, as the air is heavily charged with floating particles of cotton, and the opener is surrounded by large quantities of cotton in a loose fluffy condition. In an instant the whole room is ablaze; after the first flash, however, little difficulty is usually experienced in putting out the fire. It is a remarkable fact that, while a considerable number of women have been burned to death owing to fires occurring in the opener, only three

cases have been traced where male workers have died from this cause. We visited a press house at Nagpur where a fire had recently occurred, resulting in the death of two women. Four females were working in front of the opener when the fire broke out, along with a considerable number of men. All the men escaped without injury; when the fire was put out a few minutes later, two of the women were found dead, lying on heaps of cotton to one side of the opener. They were not seriously burned, and in the opinion of the medical officer they had probably died of shock. The room was practically an open shed, on the ground level, with numerous large uncovered openings at every two or three yards' interval. The opener was not more than fifteen feet from a large open door way. We have ascertained that in similar accidents twelve women were burnt to death at Barsi in 1902, and six women at Amalner in 1906.

103. All the accidents due to fires occurring at the opener are of practically the same character. The men generally escape without injury, other than superficial burns; the women, in most cases, are killed. The reasons for this are that the instantaneous flash bewilders the women, they become panic-stricken, and rush into danger while seeking to escape. Further, their form of garment is such that they attract much more cotton fluff than the men, who usually work with no covering but a small loin cloth. This fluff is at once ignited; and, though it probably would not in itself be sufficient to cause any serious injury, yet the feeling that their clothing is on fire still further bewilders and terrifies the female workers. Lastly, the amount of dust and fluff from the cotton thrown out from the opener is so great that the women are said frequently to cover their faces completely with a portion of their garments, in order to escape the irritation and annoyance which the fluff and dust cause. It is obvious that, in these circumstances, they have but little chance of escape should a fire occur.

104. We are satisfied that the only practicable method which will prevent the recurrence of these deplorable accidents is an absolute prohibition against the employment of women, or female young persons, in that portion of a cotton-press factory in which an opener is at work. Owing to the extremely dangerous character of this machine, we consider that the prohibition should be extended to children also, although children are, as a matter of fact, seldom engaged in any part of a press factory. The enquiries which we have made show that an absolute prohibition of this kind will not occasion any serious inconvenience to the owners of press factories, or interfere with the work there. Women are employed in front of the openers merely in order to beat the cotton, or to render the mixing process still more complete; but they could equally well be replaced by men, and the additional cost would be trifling. The absolute prohibition which we suggest would not, of course, apply to persons working on the feeding side of an opener, where it delivers into another room completely separated off from the feed-room by a partition extending from the floor to the roof. It should also be noted that our proposals do not apply to openers in cotton ginning factories; work in front of these is not dangerous.

105. Under section 20 of the present Act, Local Governments are empowered to extend the Act to factories employing not less than 20 persons. This power has been exercised by the Governments of the United Provinces, Burma, and the Punjab, limits suited to the requirements of each province being fixed. In these circumstances we see no advantage in reducing the general limit from 50 to 20 persons. This course would be open to the objection that the Act might thereby be applied in cases where its practical enforcement would be impossible, or extremely difficult: it certainly would considerably increase the work of the inspectors, and might require the appointment of additional men. We have discovered nothing in the course of our tour to lead us to think that any general extension of the Act to these small factories is either necessary or advisable.

Proposal to extend the Act so as to include all factories employing more than 20 and less than 50 operatives.

106. The Government of India referred to us the question whether, if the definition of a "factory" in the present Act were eventually held not to be sufficiently comprehensive to cover electric power stations, these factories should be specifically included in the definition. We consider that this is unnecessary. All necessary precautions for the safety of the workers are already prescribed in the Indian Electricity Act, or in the rules made thereunder; the operatives are of a much superior class to ordinary factory workers; they are in no case overworked; and they do not require protection as against their employers. We understand that the majority of the Local Governments consulted on this subject were also of opinion that it was unnecessary to bring electric power stations under the Factory Act.

Application of the Act to electric power stations.

SECTION XX.—*Administration of the Factory Act.*

107. When we find that in Calcutta, the head-quarters of a special factory inspector, from 30 to 40 *per cent.* of the children employed half time in jute factories are under the legal age of 9 years, and 25 *per cent.* of the young full-timers are under the legal age of 14 years; that in 17 out of the 29 cotton factories visited by us outside the Bombay Presidency all the children under 14 years of age are regularly worked the same hours as adults; that factory inspectors admit that they knew of the existence of these abuses, and took no steps to stop them; and that in many factories the provisions of the law for a midday interval and an entire stoppage of work on Sunday are more or less ignored—it is evident that, except at a few centres, the present system of factory inspection has proved a failure. The reason seems to us to be that Government has not appointed a sufficient number of full-time factory inspectors, and has depended too much on a number of *ex-officio* inspectors who have neither the time nor the special knowledge necessary for the work. Our deliberate opinion is that the inspection of large factories by the District Magistrate or the Civil Surgeon is, so far as the enforcement of the Act is concerned, a useless formality which ought to be abandoned. The only part of India in which a fairly

Present system of inspection.

adequate staff of special inspectors has been appointed is the Bombay Presidency, and there the Act is, on the whole, well enforced.

Proposal to increase the number of full-time inspectors.

108. We consider it essential to a proper enforcement of the Act all over India that the staff of full-time inspectors should be at once increased to a strength sufficient to cope with the work of inspecting all the factories in India. The number of such inspectors employed at present for each province, and the number we propose should be entertained, in the first instance, are as follows:—

Province.	Present number.	Proposed number.
Bombay	3	4
Bengal and Eastern Bengal and Assam	1	2
United Provinces	....	1
Madras	1	1
Punjab	....	1
Central Provinces	1	1
Burma	....	1

These recommendations need explanation in some cases:—

Bombay.

The Bombay Government recognise the necessity for an additional inspector, and there can be no doubt that the increasing number of factories in this province requires the services of another man immediately.

Bengal and Eastern Bengal.

The present inspector's charge includes also the factories in the United Provinces: he should be relieved of this part of his duties, and a second inspector should be appointed, the work in Bengal and Eastern Bengal being suitably divided between the two.

United Provinces.

An assistant inspector of factories has, we understand, recently been appointed to this province. We consider there is ample work for one full-time inspector.

Madras.

The present inspector devotes a portion of his time to the inspection of factories in Madras city only, his principal work is that of boiler inspector for the whole Presidency. We consider that one full-time factory inspector, with no other duties, should be appointed and made responsible for all the factories in the Presidency.

Punjab, Central Provinçes, and Burma.

The present inspector in the Central Provinces is also boiler-inspector for that province, and has a low-paid assistant. There is no full-time inspector in either Burma or the Punjab. In each of these three provinces, the number of large factories working throughout the year is comparatively small, but there are large numbers of seasonal factories for rice-husking, cotton-ginning, etc. If the inspectors had only duties under the Factory Act, they would not be fully employed during the months when the seasonal factories are shut down. We therefore recommend that they should be also the boiler inspectors for the respective provinces: the inspection of the boilers of the seasonal factories is best undertaken when the factories are shut down, so that their combined duties would be fairly spread over the whole year. If assistance is required in the Central Provinces, the assistant should be merely a boiler-inspector, with no power under the Factory Act, as we are strongly opposed to the grant of authority under the Factory Act to any but responsible men of some position.

Proposal to discontinue inspection by ex-officio inspectors.

109. With the appointment of this staff of full-time inspectors we would entirely do away with the periodical inspection of factories by *ex-officio* inspectors, whether ordinary or medical. We have already alluded to the uselessness of such inspections when performed by district officers, who in most cases know little about the work, and sometimes have never been inside a factory when they are called on to make inspections under the Act. To be of any value, an inspection must be made by an officer thoroughly conversant both with all the provisions of the Act and also with the internal working and arrangements of the mill, and in justice to mill-owners there ought to be uniformity and continuity of policy in carrying out the Act. We received, in the course of our tour, several complaints of unnecessary trouble and confusion caused by the conflicting orders of different *ex-officio* inspectors—orders given by an *ex-officio* inspector were, on his transfer from the district, at once reversed by his successor, and factories were sometimes over-inspected by a number of subordinate officers possessing no practical knowledge of the industries concerned.

110. The periodical inspections by Civil Surgeons and other medical officers appointed joint inspectors under the Act are in our opinion only repetitions of the inspections made by District Officers, and are equally useless. The joint inspector is supposed to give special attention to the employment of children, and the sanitation, ventilation, water-supply, etc., of the factory. These are points which will be looked into by the full-time factory inspector in future, and we see no reason to think that the same ground need be gone over again by a medical man in India, any more than in England. An ordinary inspector is perfectly competent to see that latrines are provided and kept clean, that a sufficient supply of good drinking-water is provided for the mill hands, that the factory is properly ventilated, and so on; while, if our proposals for the certification of children are accepted, an inspector's duty, so far as the employment of children is concerned, will resolve

itself into an examination of their certificates. We see no possible danger in the entire abandonment of these inspections by medical officers; and, on the other hand, we see great advantage in the concentration of the whole responsibility for the inspection of each factory in the hands of one trained inspector.

Appointment and pay of inspectors.

111. The full-time inspectors would, of course, be appointed by the Local Governments as at present. We consider that some Indian experience, if possible of the main industry of the province, and ability to converse with the factory operatives in their own language, are essential qualifications for the appointments. We do not consider it necessary that the inspector should have had previous experience of factory work in England; but we advise that every inspector who has not some experience of factories or factory inspection work in the United Kingdom should, as soon after his appointment as convenient, be allowed to pass three months with a factory inspector there. To secure men of the proper stamp and position we recommend that the salaries of inspectors should commence from Rs. 400 a month or upwards (the initial salary being fixed in each case with reference to the man's qualifications) and should rise by annual increments of Rs. 30 to Rs. 1,000: the salaries to be personal, not graded; the appointments, which should be on probation for the first year, to be made to particular provinces, but the inspectors to be liable to transfer to other provinces should the Local Governments concerned consider transfer advisable: such of the present factory inspectors as are considered suitable should be brought into the scheme at once.

Necessity for uniformity in the administration of the Act.

112. One of the questions referred to us is whether arrangements should be made to secure uniformity in the administration of the Act throughout India. Our opinion is that while nothing should be done to diminish in any way the full authority and responsibility of the Local Governments for the administration of the Act in their respective provinces, it is necessary to take steps to secure some uniformity in the administration throughout India. Wide differences at present exist in the administration of the Act in different parts of India: these have already been set forth at length in the preceding sections of our report, and need not be recapitulated here. We need only record our opinion that, if a fairly uniform enforcement of the Act is to be secured throughout India, something must be done to co-ordinate the policy and work of inspection in the different provinces.

Proposal to appoint a chief inspector of factories in India.

113. For this purpose we recommend the appointment by the Imperial Government of a chief inspector of factories in India. His head-quarters should be in Bombay, but for the greater part of the year he should be on tour, visiting all the factory centres in India at least once a year, and making long halts at places such as Calcutta, where the number of factories is great. His duties should be purely advisory, and he should not, except when specially requested or empowered by a Local Government, exercise any

power under the Act except that of entry and inspection of factories. In respect to factory inspections in each province he should be directly subordinate to the Local Government, corresponding directly with the local secretariat. He should secure uniformity of administration by calling the attention of inspectors to matters in which their inspectional work falls short of his standard. The inspectors should be bound to comply with his directions, but in doubtful cases he should take the orders of the Local Government. In the case of any difference of opinion on a cardinal point between the chief inspector and the Local Government, the latter should refer the matter for the orders of the Imperial Government. The greatest care should be taken to prevent the appointment leading to any centralisation of the administration of the Act in the hands of the Imperial Government: the Local Governments must be left free to administer the Act themselves, as in the past, the only difference being that each of them will have the advice and assistance of the chief inspector in securing uniformity of administration. The post, which must be well paid, will require a man of marked ability and tact, and with Indian experience. If he has not already had experience of factories in the United Kingdom, he should, like the inspector, be given an opportunity of seeing the work of factory inspection there.

Subordination of the inspectors to certain officers.

114. Under the present Act the District Magistrate is an *ex-officio* nspector of all factories in his district. We are of opinion that the arrangement should be continued, not for the purpose of periodical inspection of factories by the District Magistrate, but in order that the full-time inspector may have in each district an official superior who would, when necessary, control his work in that district, and to whom he can turn for advice and assistance. The practice of appointing subordinate officers, such as Assistant Collectors or tahsildars, to be inspectors of factories should, we recommend, be discontinued. In Bombay the work of the full-time inspectors is supervised and controlled by the Collector of Bombay or his covenanted assistant: we consider that the arrangement is a good one, and recommend that in Calcutta and Madras, and, if necessary, in the other provinces as well, the inspectors should be placed under the direct control of similar officers. The system in Madras by which the control of factory inspection throughout the Presidency is given to the Sanitary Engineer does not recommend itself to us.

Certifying surgeons.

115. The arrangements which we propose for the certification of children for age and physical fitness have been detailed in Section XVI of our report. To give effect to these at the principal industrial centres, we consider it essential that at least one full-time certifying surgeon should be appointed for all the factories in Bombay city, another for those in Calcutta and its neighbourhood, and probably a third for the factories in Ahmedabad and other places in Gujarat. In our opinion the work of certification at Bombay and Calcutta is badly done under the present systems: the number of medical officers concerned, the frequent changes of *personnel*, and the different standards adopted for the purpose of

ascertaining ages, all tend to this result. We believe that one special officer could, by carefully arranging his movements, probably visit all the mills in Bombay city once a week for the purpose of certifying the children, under the system we have proposed. Similarly in Calcutta we recommend that, at first, one special officer should be appointed: if it is found in practice that he cannot visit every factory once a week, then the certification of children in some of the outlying factories must be entrusted to the local civil surgeons until such time as a clear case is made out for the appointment of a second full-time officer. For the certifying surgeons in both Bombay and Calcutta, motor cars should be provided to prevent delay in getting about from mill to mill. We are not so convinced as to the absolute necessity for a full-time certifying surgeon in Gujarat, but think that the proposal to appoint one ought to be investigated by the Local Government. It is not, in our opinion, necessary that these special certifying surgeons should be members of the Indian Medical Service: it would probably be better to appoint qualified medical men who do not belong to that service, and who would, therefore, probably continue in the same post for long periods. Where full-time officers have not been appointed, the local Civil Surgeon must continue to be the certifying surgeon.

116. The proposals which we have made as regards the appointment of inspectors and certifying surgeons are necessarily of a tentative character, inasmuch as we are not in possession of sufficient information to warrant us in pronouncing any positive opinion as to the staff required, or as to the detailed arrangements to be made in order to secure proper inspection and adequate facilities for the certification of children. These details must be based upon the results of actual experience acquired as to the working of the system we propose; our specific proposals are in this respect purely of a preliminary character; and we wish it to be clearly understood that any arrangements which experience may show to be required in order to secure adequate inspection and certification should certainly be made.

Section XXI.—*General.*

Draft Bill embodying our proposals.

117. We have considered it advisable to cast our proposals for the amendment of the present law into the form of a draft Bill, embodying in a precise form all the recommendations which we consider necessary (Appendix E). While not claiming for this draft any great accuracy of legal phraseology, we have endeavoured to make it as complete and definite as possible. Objections have been taken to the present Act, both by many of the witnesses who appeared before us, and by the managers of mills which we visited, on the ground that it is too vague, and leaves too much to be dealt with by rules and notifications which managers and others interested in the Act find difficulty in obtaining, and in keeping corrected. We admit the force of the objection, and think that all directions of general application should be included in the Act.

118. We presume that the new Bill will probably be introduced and passed, with such modifications as may eventually be decided upon, during the session of 1908-09. In that case, we advise that the Act should not be brought into force until the 1st April 1910. It is, we consider, necessary to give employers of labour a reasonable time within which to make their arrangements to meet the altered conditions which the new Act will create. The Act will necessitate in some cases changes of a more or less radical character; for instance, factories working only daylight hours at present will, if they desire to work a 12-hour fixed day throughout the year, have to put in electric-light installations. Further, any change of system will probably be resented by a certain section of the mill operatives in India; and it would, we consider, be unduly optimistic to hold that the new Act will be brought into force without some temporary friction. For that reason we attach the greatest importance to its operation beginning at a time when the conditions are such as to diminish, as far as possible, the probability of any serious disorganisation occurring. In April the labour supply is, except in jute mills, normal, and the hours in factories working by daylight are approximately 12 a day. Employers will therefore be in a better position then to meet any unreasonable demands which may be made than they would be at a later period in the year; while, as the working hours will not be decreased in daylight factories, the operatives will probably accept the altered conditions more readily, and may learn to appreciate their advantages before the hot season is over.

Labour laws of Native States in India.

119. Although we consider that the effect of our proposals will ultimately be to improve materially the position of industries in India, yet we are conscious that there will be a transition period during which the disadvantages of the limitations we propose will be felt, while their advantages will not then have become apparent. During this period factories in British India may possibly suffer to some extent from the competition of adjacent factories situated in Native States, and not subject to the restrictions which we desire to impose. This is more especially the case as regards cotton ginning, spinning, and weaving factories. The question is one of considerable practical importance; and we would suggest that the Government of India should consider the advisability of making arrangements under which the conditions in these territories would be assimilated as far as possible in this respect to those obtaining in British India.

120. We regret that Dr. Nair, though agreeing with many of our conclusions and proposals, declines to sign this report; a separate minute by him is appended. This minute, which contains the first complete explanation of his views which we have received, was handed to us when our report was already in print; and we have decided not to comment on it at length. To do so would involve some delay, and would also unduly extend the length of this report, while any reply which was confined merely to the more salient points in the minute would be liable to be misunderstood. We desire to add, however, that, after

considering Dr. Nair's views, we see no reason to alter any of our conclusions or recommendations.

W. T. MORISON.

WILLIAM A. BEAUMONT.

S. M. CHITNAVIS.

A. McROBERT.

J. NICOLL.

VITHALDAS DAMODHER THACKERSEY
(subject to my minute of dissent).

Minute of dissent by the Hon'ble Mr. Vithaldas Damodher Thackersey.

The recommendation of the majority fixing 12 hours as the working day for young persons will, for all practical purposes, bring down the economical working of cotton factories to 12 hours a day. Now, this would affect adversely the large majority of cotton factories which until now stuck to daylight hours and successfully withstood the great temptation to earn larger profits by the introduction of the electric light. Before the practice of working with artificial light became common, no suggestion was ever made from any quarter that the working hours of mills were excessive. On the contrary, evidence from all sides pointed to the fact that the natural light system was best suited to a country like India, not only from the point of view of manufacturers but also from the point of view of the workers. The Factory Commission of 1890, under the Presidentship of such an able and experienced officer as Dr. Lethbridge, and having as a member so zealous a champion of the labourers as the late Mr. S. S. Bengali, examined minutely the whole question of the working hours of the mills. They were assisted in their enquiry by such local representatives and ardent supporters of the interests of the mill-hands as the late Mr. N. M. Lokhandey of Bombay, Mr. Framji Manekji of the United Provinces, and Babu Russick Lal Ghose of Calcutta. That Commission in fact was appointed with special instructions to ascertain by means of specially directed enquiries, conducted in the centres of factory labour, the views and requirements of the Indian operatives themselves as to the restrictions to be imposed on their labour in factories. They went thoroughly into the question of working hours by examining a large number of factories, and workmen, some of whom were put forward by the accredited local representatives on the Commission in each province; and the Commission recorded the conclusion that, "The operatives desired that the present working day, daylight to dusk, should be continued." The Commission further observed :—

"We give it as our opinion that there is nothing in the conditions under which Indian operatives work which calls for any legislative restrictions as to the hours an adult male may choose to work. Nor can we conceive any condition which can ever call for State interference in this matter." In accordance with this view the Indian Factory Act of 1891 contained no provision to limit the working hours of adult males directly or indirectly. I may mention here that that Act was regarded as embodying all the changes that were called for by the conditions of the mill industry. Replying to an observation from the late Hon'ble Mr. Nugent, who was the official representative of Bombay in the Viceroy's Legislative Council, His Excellency Lord Lansdowne said :— "We believe that the effect of our measure will be to place factory labour in India on a proper footing, and our Bill will be accepted here and at Home, not, as the Hon'ble Mr. Nugent would have us believe, as a mere prelude to still further restrictions, but as a settlement as final as any settlement of such a question can be."

I do not say that an assurance such as this precludes the Government from revising the law in the light of any change in the conditions

of the industry. But the only circumstance that can be said to introduce a change in the conditions that prevailed in 1890 in the working of the mills is the introduction of electric light in some of them. In mills which do not use the electric light, the conditions of labour are precisely what they were at the passing of the present Act. The mills which work by natural light are the majority. Some mills which tried working with artificial light found it wasteful and have discontinued its use. I cannot help thinking that it is extremely unjust to these mills to be subjected to new restrictions while they have continued to conform to the practice of what Sir James Campbell, Collector of Bombay in 1892, called "the natural and satisfactory practice of limiting work to the hours of daylight."

Even to-day after 17 years, evidence before the present Commission strongly confirms the conclusions arrived at by the Factory Commission of 1890, whether we look to the evidence given by the large number of manufacturers or to the evidence taken from the mill-hands themselves. In the mass of evidence before us, there is a consensus, particularly in the Bombay Presidency, that the daylight hours are the most suitable to the manufacturers and the operatives. And what is more significant, two of the strongest opponents of long hours in cotton mills, the Hon'ble Mr. H. E. E. Proctor, Chairman of the Bombay Chamber of Commerce, and Mr. Bezanji Dadabhai, the well-known manager of the Empress Mills at Nagpore, whose 31 years' experience of the management of mills and close association with the mill-hands, entitle his opinion to the greatest weight, both advocated working from sunrise to sunset as the most suitable for the operatives. I quote Mr. Bezanji's words as reported in the evidence :—"He objected to the fixed 12-hour day because in the short day they would have to work by artificial light and this did not conduce to good work. He preferred daylight working, and the operatives did so too, as they did not like being kept in the mill after dark. Some of them lived a distance of 3 miles from the mill. Most of the factories in India worked by natural light, and once the electric light was introduced, there was the constant temptation to work longer hours. If the hands had the option, they would choose daylight working in preference to a fixed 12-hour day."

The evidence of operatives also tends to the preference of daylight to dusk hours (see pages 28 and 156 of the minutes of evidence). On all occasions, in Ahmedabad and in Bombay, the President kindly invited me to accompany him whenever the operatives had to be examined. We minutely questioned them, and their spontaneous reply was always that they did not wish to be worked by electric light. We then explained to them that in that case the longest day came in the hottest part of the year, and the shortest in the cold weather, and, further more, that Government may not be willing to legislate for a changing day. In spite of this explanation, Ahmedabad operatives to a man stuck to the natural day, and expressed their opinion in a decided way to the following effect :—"If it is a choice between 12 hours fixed day all the year round and an average 12-hour day, shorter in winter and longer in summer, then we are all in favour of

the average 12-hour day because we do not wish to work by electric light at any cost. It injures our eyes and we wish to work by daylight only. We would rather do the extra hour in summer than work by electric light for even an hour in winter." On another occasion at Ahmedabad the operatives said :—" At present the mill does not work by electric light though an installation has been put in. But if night work is introduced, most of the Mussalman weavers will leave and go elsewhere. We can get work in other mills . . . We strongly object to work at night." At Bombay, although the first expression was, as I have said, for natural light, after our explanation the opinion became divided. I take the following from the evidence :—" Some of us wish a 6 A.M. to 6 P.M. day fixed absolutely all the year round, because if there is any variation from day to day the manager will take advantage of it and gradually increase the hours. Others of us wish for daylight working only, *i.e.*, about 11 hours in winter and 13 in summer, varying with the length of daylight. This was the practice before electric light was introduced, and some of us wish to revert to it so as to escape work by electric light altogether."

Further evidence of the suitability of the natural day system can be found in the fact that out of 224 cotton mills in India, about 100 are fitted with electric light, and even of these 100 the evidence shows that many work from daylight to dusk in spite of their installation.

It has been calculated that the daily average working hours of a mill working daylight hours will be 12 hours and 5 minutes in the whole year. This calculation, however, does not take into account the second half hour interval which will have to be given under our recommendation when the working time exceeds 12 hours. When that is considered, the longest working day in the year will be about 12 hours 45 minutes and the shortest 11 hours ; while during the greater portion of the year it would be about 12 hours. The average would be about 11 hours and 54 minutes. Thus, the great advantage of the natural day is that while it will not lead to excessive working of young persons, it also sets a limit to working of adult males, and renders overworking impossible. It would greatly facilitate inspection because the mills under this system cannot be worked after dusk, while the mills worked with artificial light will require inspection to prevent time cribbing. This must be a very powerful argument in favour of the natural day as in a vast country like India, where factories are scattered far and wide, oftentimes singly, it would be practically impossible to detect time cribbing if every factory is forced to put electric light.

The statement that mills in Madras will not be seriously affected by a fixed 12-hour day is not borne out by the inspection notes, where it is recorded (Nos. 150, 151, 161, and 162) that they are affected to the extent of from 15 minutes to one hour in their longest day.

It has been objected to my proposal that it would be impossible from the point of view of Government control to permit two totally different system of hours side by side in the same place. The obvious reply is that the natural day system does not need special control, and therefore the work of Government control will be much reduced in places

like Bombay, while in places like Ahmedabad, where out of 45 only 2 or 3 mills use electric light, the work of control will be practically *nil*. In the Central Provinces, Madras Presidency, and in many individual mills in out of the way places, except for children, no special inspection will be required and much Government expense will be saved. On the contrary, if two systems exist side by side in Bombay, it will greatly help the operatives who have expressed their opinion in a divided way to select conditions best suited to their particular tastes and ideas.

The other argument used against my proposal is that, in the opinion of the majority, the fixed day will ultimately conduce to better working and will be to the ultimate advantage of the manufacturers and the hands. If that view be correct, the millowners and the mill-hands will themselves, in their own interest, adopt the 12-hour days and will not require any compulsion by the legislature, more particularly as the adoption of the 12-hour day will appreciably add to their working hours at the end of the year. Such a settlement is far preferable to one which must be arrived at with friction, disorganization, and discontent of manufacturers and operatives alike.

The argument that operatives will work in the natural-day-mills in the hot weather, and in the electric-light mills in the cold weather, does not appear correct. The former class of mills cannot employ an increased number of hands in the hot weather, nor can the electric-light mills do so in the cold weather.

The only plausible objection to the natural day is that it involves 45 minutes more a day in the hottest part of the year than under the 12-hour system. Against that, however, it may be mentioned that in the Bombay Presidency in particular, which contains the largest number of cotton mills, the atmospheric conditions in the cold weather months are most unfavourable and the hands have to work harder at piecing up the ends in the spinning department where young persons and children are mostly employed; while in the hot weather months the weather conditions being extremely favourable to spinning, there are fewer ends down and hands have to do less work.

In the Punjab and the United Provinces, where the days vary more in length than in Bombay, the Central Provinces and Southern India, and the heat is more severe, the manufacturers have themselves found out what is best for them, and have already put up electric installations. As is pointed out in the report, the working day may extend in the hot weather to 13½ hours, with natural light; but even now in the hot weather many of the mills actually work shorter hours than in the cold weather, and they will therefore adopt the uniform 12-hour day as a matter of course, without giving rise to any disorganization. In the United Provinces and the Punjab the climatic conditions are in fact the reverse of those obtaining in Bombay; and it would be absurd to suppose that manufacturers there would voluntarily adopt any system under which they would work their factories for long hours, while the conditions affecting spinning were unfavourable, and for shorter hours in the cold weather when the conditions were favourable.

Under my proposal the only change will be that in natural-day mills young persons would be allowed to work the daylight hours and the children half of the daylight hours without in any way increasing their working time under the 12-hour day system. I do not propose to increase the working hours of women, and as regards children my suggestion will give them a maximum of about 22 minutes over 6 hours for 2 or 3 months in the year, while it will bring down their work to about 5½ hours in the cold weather months.

Although I have discussed the question of a natural day in relation to cotton mills, it must not be forgotten that there are other industries where the natural day system is the only working system and where working by electric light is not usual. I may instance the woollen mills, the saw mills, the silk and paper mills, the match factory, the hosieries, etc. Speaking for the Bombay Presidency at least they all work by natural light, and although they have been proved never to work excessive hours, they will be as much affected as the cotton mills.

In the face of the facts set forth above, of the opinion of the Factory Commission in 1890, and the evidence of the operatives taken by it, of the consensus of opinion in favour of the natural day among manufacturers and operatives alike, of the general practice of working on that system in the majority of cotton mills, and wholly in some other industries, of the total absence of anything in the evidence against it, of the strong opinion expressed by Colonel Mactaggart that he had absolutely no reason to think that the hours of labour in force in the Bombay factories had any bad effect on the health of the operatives, of Dr. Turner's evidence that the mortality of the factory operatives is less than that of general labourers, and of the substantial advantages in respect of inspection, and the convenience of the operatives, I am strongly of the view that it is extremely impolitic and unjust, especially after the assurances of the Government of India in 1891, to interfere with a system so agreeable to manufacturers and operatives, and suitable to the conditions of the country.

VITHALDAS DAMODHER THACKERSEY.

Minute of dissent by Dr. Nair.

I beg to submit a separate report on most of the important points referred for the consideration of the Indian Factory Labour Commission. I regret that I have to differ on these points from the opinions of my colleagues, with whom I have worked so cordially for the last six months.

Introductory.

But the result of our investigations held all over India during the last few months into the various aspects of factory labour in this country leads me to a different conclusion to the one arrived at by my fellow members of the Commission. In spite of some attempts made in certain quarters to draw the Lancashire red herring across the track of the Factory Commission, I never deviated from my fixed purpose of investigating things at first hand and of forming my opinions on the strength of what I saw and heard, rather than trusting to external inspirations to guide me in my inquiries. To me, personally, there was no incentive to take any step which would even to the smallest degree handicap the industries of my native country in competition with Lancashire or Japan. But however much I, as a native of India, may be opposed to the interference of Lancashire in questions closely relating to the manufacturing interests of India, I cannot but admit that the result of Lancashire's interference has, on some occasions at least, been of considerable benefit to the Indian industries. The protection which factory women and children at present enjoy, under the law, they owe, to a large extent, to Lancashire. The many abuses which we found to exist in connection with factory labour in India are certainly not of Lancashire's creation. I am not prepared to maintain that because certain representatives of the cotton industry in Lancashire, the chief competitor with the Indian cotton industry have prominently drawn the attention of the authorities to the existence of grave abuses in the working of the Indian textile factories, those abuses ought to be condoned. Abuses are abuses whether they are pointed out by friends or foes. The only questions for us to consider were did these alleged abuses really exist, and, if so, what were the best means of removing them.

The chief complaint against the existing system of factory labour in India is the inordinately long hours that the labourers are worked in many industries and especially in the textile mills.

Section I.—*Adult Males.*

I am of opinion that the charge of working long hours habitually has clearly been proved against the textile industries in India, and I am further convinced, that taking all the circumtances of the case into consideration, nothing but legislative restriction of the hours of adult labour within reasonable limits will effectively prevent these long hours from being worked. This is the first point on which I differ from my colleagues, and I shall now proceed to give my reasons for the conclusion I have arrived at.

We have had ample evidence to prove that long hours are worked periodically in several of the industries in India. We have seen that operatives in ginning factories have had on occasions to work 17 and 18 hours a day. In rice mills and flour mills men have occasionally to work 20 or 22 hours. In printing presses men have had to work for 22 hours a day for seven consecutive days. I admit that these are only occasional occurrences. But for habitually long hours one must go to the textile industries.

Long hours worked in the textile industry.

The tendency to work long hours in the cotton mills in Bombay began, I understand, in the year 1898, though in Agra it has existed for the last 20 years. But the question of the inordinately long hours in these mills did not seriously attract public attention till the year 1905. The Collector of Bombay in his letter to the Government of Bombay, dated 24th June 1905, pointed out that out of 74 mills, the exact working hours of which he had ascertained, 16 mills worked 14 hours or more a day and 33 worked 13 hours or more. That was in the first half of the year 1905. But in June 1905 the Collector of Bombay wrote that "the above figures are now exceeded, and in some cases 14½ hours a day are worked from one end of the month to the other." A good deal has happened since 1905 to disturb the Bombay millowner who is inclined to work inordinately long hours. And yet 6 months ago, when the present Factory Commission was in Bombay, long hours of working were by no means unknown in the Bombay mills. Out of 20 cotton textile mills in Bombay, whose exact working hours were ascertained by the Commission, 1 mill worked day and night with changing shifts. Of the remaining 19 only 8 had fixed hours of working all the year round, and all of them worked 13 hours or more every day, exclusive of the midday interval, while 1 of them worked 14 hours a day. The 11 other mills, although some of them were fitted with electric light had changing hours in summer and winter. In summer they all worked between 13 and 14 hours, while in winter their hours came down to between 11 and 12½.

This system of daylight working, which is very much favoured in Ahmedabad, has resulted in very long hours being worked in the hottest and most trying part of the year. Thus, out of 10 mills in Ahmedabad and Broach, the hours of which were ascertained, 3 mills worked in summer 14 hours or over, while 7 worked between 13 and 14 hours. Some of these mills were fitted with electric light. For these long hours worked in summer in Ahmedabad there was some compensation in the winter season when the hours of some of these mills came down to 11. It was given to two cotton mills in Cawnpore to discover that, while they could work between 13 and 14 hours by daylight in summer, all that they had to do to work equally long hours in winter was to switch on the electric light.

The mills in Agra have comparatively fixed hours. In summer they work 15¼ hours a day, while in winter they come down to 13¾.

Calcutta is not a great centre of cotton industry, but even there the Commission visited 5 cotton mills, 1 of which works 13 hours

a day all the year round, while another works its weaving department 13½ hours and is content with 12 hours for the spinning department.

Delhi not to be behindhand of Agra can show hours in its cotton mills going up to 14 and even 14½. The jute mills in Calcutta, with few exceptions, work 15 hours a day, but it must be conceded that they work on the shift system except their weaving departments in which there are no real shifts at all. These facts and many others, which the Commission have recorded in their inspection notes, prove conclusively to my mind that the hours worked in the textile mills in India are excessive. And what is more, there is nothing to prevent the hours from getting longer. How can it be otherwise? His Honour Sir John Hewett, Lieutenant-Governor of the United Provinces, in his note to the Factory Commission, remarks: "I believe that the long hours which are followed, or at all events have been followed, at times in the jute factories in Calcutta and the cotton factories in Bombay have been to some extent brought about by what seems to me to be a pernicious system, namely, that under which in the former the agents of a mill are remunerated upon the gross outturn and not upon the profits, while in the latter those who financed the mill in its early days receive a rate of remuneration fixed at so much per pound of cotton cloth produced. These two factors point to outturn, not profits, as the object to be aimed at, and are productive of wasteful and uneconomical management." His Honour has put the case very well and further comment is superfluous.

Habits of Indian operatives.

But we are told that these hours are only apparently long, and that really the labourers in Indian mills work very casually, loiter about a good deal, go out when they like to eat, to drink, to smoke, and so on. This is a very old argument which has been repeated times without number, and nearly every one seems to be inclined to attribute the whole phenomenon of loitering to the ingrained habit of Indian workmen. I have carefully studied this so-called "ingrained habit" of the Indian workmen, and have come to the conclusion that it is not an ingrained habit at all but only a manifestation of the adaptive capacity which all human beings possess more or less. Intense and concentrated labour in a cotton mill for 13 or 14 hours, day after day, week after week, and month after month is beyond the physical endurance of ordinary human beings. And so when a mill operative, who has to earn his living by his manual labour, is put to work at a machine for a longer period than he can possibly endure, he has to adapt himself to that work in such a way that he can get through the work required of him with the least possible injury to himself. The labourer does not spread out the work over a long period of time, but finding himself compelled to work a long number of hours, reduces the intensity of labour as a safeguard to his own physical well-being. And under these conditions of struggle for existence the fittest to survive are not the worthiest or strongest, for they soon break down under the strain of long hours of work, but the most idle. A system more likely to bring about degradation of labour is impossible to conceive. That the Indian labourer has no ingrained habit which prevents him from sticking to his work is sufficiently proved

by the facts supplied by an Upper India woollen mill, and which are quoted in the report of the majority of the members of the Commission.

Taking the average for the whole year the workers in that woollen mill took 1·05 spell of rest each a day, which is about 20 minutes a day. The explanation for this absence of the "ingrained habit" in the operatives in this woollen mill is twofold. Its hours are short and its management is efficient. One European mill manager admitted that the loitering habits of the operatives could be put a stop to if efficient supervision is exercised, but as such efficient supervision was costly, he preferred to go on as at present. The instances of the operatives in the jute mills working by shifts and of operatives in engineering works loitering less than the workers in cotton mills, mentioned in the majority report, further prove the relation between long hours and loitering. But the most notable instance of all is found in the case of the women workers. Women workers all over the mills in India loiter less than men, for the simple reason that they work shorter hours. In my humble opinion, in India it is the worker who suffers from bad management and not the management that suffers from bad workers. The experience of other countries that "short hours have also reduced the interruptions in the course of the day" has been realized at least in one mill in India, and in the face of these facts to go on charging the Indian labourers with possessing ingrained habits of idleness is to use the expression once used by the present Chief Commissioner of the Central Provinces "the refuge of the sweater."

Skilfulness of the Indian operatives

Next to the alleged idle habits of the Indian operative the quality in him which is supposed to necessitate these long hours is his unskilfulness. That at the commencement of the factory system in India the operatives were absolutely unskilful stands to reason. But that in the last half century they have made little or no progress in skilfulness is a proposition which requires further proof to support it. On this point the evidence given before the Commission is conflicting. Some have stated that the operatives have improved considerably in skill, while others maintained just the opposite view that they have made no improvement, while yet others went further and said that they never will. I am not competent to judge between these conflicting opinions. But I feel inclined to the view that the operatives have improved and are improving gradually.

It is a well-known fact that in Bombay wages have gone up. But at the same time the cost of labour to the cotton industry has not risen appreciably. This is partly due to the increased productive capacity of the Indian operatives. Outside experts, who are competent judges in matters of this sort, like Mr. James Platt and Mr. Henry, Lee, are of opinion that " in no country on earth except in Lancashire do the operatives possess such a natural leaning to the textile industry as in India." Dr. G. Von Schultze-Gaevernitz writing in 1895 expressed that "the number of operatives up to this time 5 or 6 times as many as the English is to-day in the best spinning mill in Bombay only 3½ times as high, *i.e.*, does not stand far behind the German." If that

statement is correct, and in 1895 if the Indian operatives did not stand far behind the German there seems to be no reasonable ground to complain of his slow progress or no progress. And at the present time according to the very careful calculations made by Mr. Simpson of Messrs. Binny & Co. of Madras, a cotton mill in Madras with 35,000 ring spindles, 800 looms, average count 16s working $67\frac{1}{2}$ hours a week would employ 2,622 operatives all told. Whereas for a similar mill in Lancashire working $54\frac{1}{2}$ hours a week the total number of hands required would be 982, which works out a proportion of 2·62 Indian hands to 1 English hand. And if we also consider that the average monthly wage of a Lancahsire operative will be about Rs. 60 and the average monthly wage of a Madras operative is Rs. 15 it is clear that for the same money the Indian millowner gets nearly double the work that an English millowner does. "India is the mother country of the textile industry, and up to the time of Arkwright possessed the monopoly of fine yarns," and it seems incredible that the Indian labourer in the textile mills is making no progress in skilfulness. Before condemning the Indian operative as inefficient and incapable of improvement he ought to be given a fair hearing. In a memorial submitted to His Excellency the Marquis of Lansdowne, Viceroy and Governor-General of India in 1889, by the mill operatives of Bombay, it was stated that "it has been said to the detriment of your petitioners that an Indian mill operative is not as hard-working as his brother workman in England, and that a mill operative in England does the work of three men employed on the same work in an Indian mill. . . . . The real cause of this, your Lordship's petitioners submit, is the bad machinery and the bad raw material used in the mills. . . . The breakage in the thread is so continuous here on account of the bad quality of the cotton that millowners are compelled to employ more men." As the effect of the long hours has to be considered before judging of the idle habits of the Indian operatives, so the quality of the raw material they have to handle has to be taken into consideration before the extent of their skilfulness or otherwise is determined.

The influence of long hours on the physique of the Indin operatives.

Leaving aside these excuses which are usually put foward to justify the long hours worked in Indian mills, I now come to consider the effect of long working days on (1) the mill operatives, (2) on the textile industry in India.

The question as to whether the physique of the operatives has been injuriously affected by the long hours they are made to work in the mills has engaged the serious attention of the Factory Commission. We have tried to find out the actual truth of the matter by personal inspection of mill operatives, by examining and cross-examining medical men in the different centres of mill industry in India, and by the study of various vital statistics bearing on the question.

The question is an exceedingly difficult one. The necessary data for arriving at a correct scientific conclusion are absent; Indian vital statistics are notoriously unreliable; mill hands are constantly changing;

and medical men in India, and even hospital authorities, under the depressing effect of a peculiarly trying climate do not keep any records of the clinical features of the cases they examine. Under a combination of these adverse circumstances any definite opinion expressed on the point at issue is likely to be more dogmatic than scientific. I have carefully inspected the operatives in over 200 mills in different parts of India, and, in my opinion, they were all apparently healthy. On the strength of such inspection, however, I am not prepared to say, as my friend Lieutenant-Colonel Mactaggart does, that there is no physical deterioration among the factory operatives in India. The chief test, in my humble opinion, of physical deterioration is diminished power of resistance to disease.

The Sickness Index, as Dr. Turner of Bombay observed, is the only reliable criterion, and accurate evidence on that point is not available. Rough and ready statements like "the mill operatives as a class are far more healthy than outside labourers of the same class" or "the mill operatives are of very poor physique and distinctly inferior to the agricultural labourers" are good enough in their way, but are unsuited for any scientific conclusions to be based upon. Colonel Mactaggart makes much of the absence of skin diseases and of tubercular glands among the operatives as proving their healthiness. To my mind these facts do not warrant the inference drawn from them. I saw several cases of skin eruptions in very healthy looking children in some of the Calcutta jute mills. I am not prepared to say that there is physical deterioration in these children because they exhibit certain skin eruptions. These skin eruptions are well known to medical men as belonging to a class of skin diseases commonly called "Trade Dermatitis." Many dermatologists consider that these are all varieties of Dermatitis Veninata. They are purely caused by external irritation from jute or other materials that the workers have to handle, and have nothing to do with physical deterioration. The absence of tubercular glands again does not necessarily indicate, to my mind, the absence of any tendency to tubercular affection in the operatives. And the evidence of Major A. Street, F.R.C.S., I.M.S., Surgeon to the Jamsetji Jejeebhoy Hospital, distinctly points to the presence of tubercular glands in children working in the mills. "From my experience at the J. J. Hospital in Bombay," says Major Street, "I am sure that tubercular glands of the neck are particularly common in young operatives, and frequently point out to my students that they (the operatives) and firemen on board ship produce the large majority of the cases we see." Major Gordon Tucker, Physician to the J. J. Hospital, confirms the statement of Major Street, his colleague on the staff of that Hospital. "Phthisis is very common among them (the mill operatives)" says Major Gordon Tucker. And he continues—"speaking broadly the ordinary case of tuberculosis seen in Hospital would be a mill-hand, while the ordinary case of malaria would be a coolie. Contrasting the physique of these two classes, the mill-hand came out badly."

Thus the evidence of these two medical men, one a surgeon and the other a physician, on the staff of the largest hospital in Bombay, the city

with the biggest factory population in India, affirms the greater prevalence of tuberculosis among mill-hands. Unfortunately these medical men have not been able to give us any statistics, as the records of the J. J. Hospital are periodically destroyed, and with them all evidence of the greater prevalence of tubercular affections among mill-hands. But the impressions of two clinical teachers in big hospital, with a medical school attached, are even more valuable than statistics. Where the hospital doctors of Bombay failed, the Health Officer of Bombay, Dr. Turner, has given us some statistics bearing on the point although they cover only a period of six years. His figures were published in Appendix G of the Textile Factory Labour Committee's report and again they are published along with his evidence before this Commission. Dr. Turner has given figures to show the incidence of phthisis among the factory population and the general labourers for the years from 1900 to 1906. Comparing the figures there is a slight excess in the percentage of deaths from phthisis in Bombay among the factory hands as compared with the general labourers. The excess is not very marked. But it must be considered that among the general labourers Dr. Turner has included earthworkers and dock labourers, two classes of workers who are exceedingly liable to lung diseases. The general death-rate of mill operatives is everywhere quoted as exceedingly low. It was the same case in the evidence given before the Select Committee appointed in England in 1816 to investigate into the state of the children employed in factories in the United Kingdom. Commenting upon that Sir Robert Peel said in the House of Commons, "if the evidence were to be trusted, instead of debating such a bill as was then before them, application ought to be made to the Legislature for the erection of cotton mills for the purpose of further and more effectually providing for the health of His Majesty's liege subjects." The evidence of the aforesaid 3 Bombay medical men, although not sufficient to give a decided opinion as to the existence of physical deterioration in the mill operative—for that as I have already said there are no data—is still enough to create a strong suspicion that the health of the mill operatives in Bombay is not all that it should be. And strongly corroborative of them we have the evidence of two medical men, both of them Indians practising medicine in Bombay. Sir Bhalchandra Krishna thinks that there is physical deterioration among the mill-hands, but is careful enough to say that it is due to bad ventilation in the mills and to the alcoholic habits of the operatives, and not to the long hours of work. If the mills are badly ventilated, the longer the operatives work inside them the greater the accumulation of carbonic acid and other impurities of the respired air in the atmosphere inside the mill, and consequently the greater the injury to the operatives working inside them, is a fact which perhaps escaped the attention of Sir Bhalchandra Krishna. Doctor Chavan, L.M.S., is a native of Ratnagiri, the district from which a large number of mill operatives come to Bombay. He has a large practice among mill-hands, and his opinion that the mill operatives suffer to a very large extent from phthisis and dyspepsia is valuable. He comes more into contact with the mill operatives than most Civil Surgeons are

likely to do. Doctor Chavan of Bombay and Rai Sahib Dajee Ramachandra of Nagpur, although they may not be men of such high professional standing as most of the other medical witnesses who gave evidence before the Factory Commission, have, I believe, a greater and more intimate knowledge of the factory operatives, and their evidence I consider of great value.

The majority of the medical witnesses said that they have not observed any physical deterioration among the factory hands and that they have not noticed that the operatives were more liable to any diseases than other labourers. This negative statement does not carry us very far. There are many reasons that render it difficult for the ordinary Civil Surgeon to observe evidences of physical deterioration in the mill operative, when they are present. These causes may roughly be divided into (1) the habits of the mill operatives, and (2) the nature of the development of some of their maladies. Any one who knows natives of India, and specially the lower classes in India, knows how nervous they become when even the slightest illness attacks them. If they happen to get ill away from home their chief concern is to get back home. This peculiar habit, or frame of mind, call it by whatever name, is in my opinion more responsible than any thing else for the extraordinary changing of mill-hands that is noticed in all the Indian textile mills. Mr. Leslie of Graves, Cotton & Co. of Bombay, Mr. Bezonji, Manager of the Empress Mills, Nagpur, and Mr. Simpson of the Buckingham and Carnatic Mills, Madras, have all supplied us with very careful statistics which go to prove that *all* the hands in a mill change on an average once in 18 months. Mr. Leslie says "that the most astonishing figures in this respect are to be found in the number of people who applied for 'leave altogether' or in other words resigned. These total no less than 2,158 in six months and represent 38 per cent. of the total number of people employed. I must confess that these figures came as a surprise to me for they go to show that some 18 months is really the maximum period for which a mill-hand works in a Bombay mill at a time." But Mr. Leslie's figures for Bombay are corroborated by mill managers in Nagpur and Madras and therefore it is safe to assume that the practice is general in all the textile mills in India. What is the explanation of this constant taking of 'leave altogether' on the part of the mill-hands. The explanation usually given by the mill managers is that all the mill operatives are peasant proprietors who have their little plots of land in their own village and that they leave the mills from time to time to cultivate and look after their lands. I have heard this explanation given at least fifty times in the course of our enquiry. In spite of its universal acceptance by millowners and managers I have considerable difficulty in accepting it. In the first place I cannot believe that the three quarters of a million mill operatives in India are all or even a majority of them owners of plots of land, however small.

At the utmost about 20 per cent. of the total number of mill operatives in India may own land themselves or may be members of undivided Hindu families owning land. The remaining 80 per cent. if

they periodically leave mill work to go and cultivate lands must do so as hired agricultural labourers under some landed proprietor. Generally speaking, as agricultural labour is paid less than mill labour in India there must be some explanation for the operatives leaving more remunerative work for less paid labour. Then again agricultural labour is seasonal. It does not go on all the year round. The figures of the Carnatic mills show that the hands left the mills in large numbers every month. Taking the year 1907 the lowest number that left in any month was 264 in November and the highest 397 in May. The average for the whole year was 329 a month. This shows that it is not to work in the fields that the hands leave the mills.

We were also told that most of the mill-hands save enough money in a few years and then retire and go back to their village homes and live on their savings. I doubt if this happy termination of a mill operative's life occurs even to 1 per cent. of the hands employed in Indian mills. Good many of the hands are indebted to money-lenders having borrowed money on, usually in Bombay at 72 per cent. interest, I am told. Many others spend a fair proportion of their earnings on drink. A large number have to send money every month for the maintenance of their families left behined in their villages. And after all these, if the mill-hands in a few years can save enough out of their 15 or 20 rupees a month to live in comfort "ever after" they must be extraordinary financiers indeed. In all our inspections of mill operatives I noticed that there were very few men over 40 to be seen. In England, I am told, that men over 40 or 45 are generally not taken into the mills. In India, where everywhere one hears complaints of shortage of labour, managers welcome all labourers young and old. And yet men over 40 are not generally to be seen. Again the explanation is given that they have all retired on their savings. Is it likely? Whatever may be said of the Indian operative it cannot be said that he is not fond of money. If then, he has health and strength to do the work which he was accustomed to do for some years, is it likely that he will give up his work and his wages. The Indian officials in Government service show no such tendency to retire. When they reach their 55th year they usually very humbly request Government for an extension of service. Why is the mill-hand so anxious to retire? In my humble opinion the reason of the early retirement of the Indian mill operative is his physical breakdown which unfits him for any further mill work. Mr. Bezanji, who has been the manager of the Empress Mill, Nagpur, one of the largest cotton mills in India, for over 25 years, told me that he has seen men who had worked for some years in his mill and subsequently left the mill, bringing food every day to some of their relations working in the mill. And when asked why they did not themselves work in the mill, they replied, that they had no longer the strength to work. This exodus from the mill by the time the physical break down comes prevents the physically deteriorated mill-hand coming under the observation of the Civil Surgeon.

Then it has been stated that the gradually advancing physical deterioration in the operatives actually at work in the mills ought to

have been noticed, if it really existed, by the various ex-officio medical inspectors who from time to time visit the mill. But I should like to know how many medical inspectors have closely examined the operatives. How many of them have put a stethescope to the chests of mill operatives. How many have watched from time to time the nature and frequency of attacks of such apparently trivial ailments like cough, fever, diarrhœa, etc., to which the operatives are subject. According to Doctor Kingston Fowler, of Brompton Consumption Hospital, people who work in dusty atmosphere, in imperfectly ventilated rooms, are very liable to develop fibrosis of lung combined with tuberculosis. Workers in cotton mills are, among others, liable to this form of lung affection. Cough is the first symptom noticed. "The course of the affection is extremely chronic and for years there may be no other symptoms except a moderate degree of emaciation. Cases which have run a very prolonged course may terminate with very acute symptoms. Emaciation may be rapid towards the close." And Dr. Fowler also says that the presence of tubercle could hardly be discovered in the early stages by physical examination. If that is so, it will be interesting to know how it is possible for any medical man walking through a mill looking at all the operatives to say that there is no physical deterioration and that the operatives are all healthy? Before the operatives go away on their "leave altogether" they take unauthorized holidays. On an average an operative in a cotton mill absents himself from work from 4 to 6 days in a month. The managers put this down to absolute laziness on the part of the operatives. The operatives themselves when questioned about it explained that it was out of sheer physical exhaustion that they occasionally gave up a day's work and wages and took rest. This explanation to my mind seems to be the correct one, and for this reason. After the Commission paid a surprise visit at 7-45 P.M. to mill No. 27 (inspection notes) the following note was recorded :—"The carding and preparation rooms (the only part of the mill at work) were badly lit, and there was no ventilation, all windows were closed, and the air was hot and oppressive: the perspiring workers looked dull, listless, and exhausted, and the few children half dazed." I am perfectly convinced that if the mill operatives generally go home in the condition in which I saw the operatives of Mill No. 27 on that November evening, they cannot possibly work for 26 days in a month. And if that is the condition of the operatives at the end of a day's work in November in a mill working 13½ hours a day, one can more or less imagine the state of the workers in a mill which works 15¼ hours during an Indian summer's day. We have often been told that on account of the loitering habits of the Indian operative he never gets physically deteriorated even though his hours of duty may be long. In the course of a similar inquiry in England in 1816 when a medical witness was asked if inhaling of dust and cotton fibre were not injurious to health, he declared himself quite unable to say; and when invited to say why not, suggested that "the bad effects were counteracted by constant expectoration."

The Indian factory population is a constantly changing one. Men from agricultural districts come to town to work in the mills, get rapidly deteriorated under the strain of long hours in closed and stuffy

rooms, and are replaced by another set from the country who are "used up" in their turn and passed back to their villages. The only town in India with anything approaching to a permanent factory population is Cawnpore, and the half-timers in Cawnpore, probably the children of used up mill operatives, were physically among the worst we saw anywhere in our tour of inspection.

The only other statistics that I have to notice in connection with the question of the physique of the operatives are those relating to their weights. In almost every mill visited by the Commission a certain number of adult operatives chosen at random were weighed and their weights recorded in the inspection notes. But as mere recording of the weights of a certain number of operatives in itself led to no conclusions, I believe, at the suggestion of Lieutenant-Colonel Mactaggart, the Commission decided to compare the weights of the operatives with the weights of the prisoners in the provinces to which the operatives belonged. The figures for the weights of prisoners were kindly supplied by the Jail Department of each province, and a comparative statement of the weights of mill operatives and prisoners has been prepared. As the large majority of the operatives in Bengal and the Punjab really come from the United Provinces and those in Burma from the Northern Circars of the Madras Presidency I compare below the operatives in those provinces with the prisoners of their native province.

Province.	Average weight of spinners. ℔.	Average weight of prisoners. ℔.	
Bombay	102·09	112·12	
United Provinces	107·01	115·08	U. P.
Bengal	107·93	115·05	U. P.
Punjab	113·8	115·05	U. P.
Madras	113·63	114·38	
Burma	117 14	125·7	Rajamundry.
Central Province and Berars ..	100·92	110·45	Central Jail.
Eastern Bengal and Assam ..	108·	110·846	

It has been suggested that these comparisons are not fair as every Jail Superintendent makes it a point to feed up and fatten the prisoners under his charge. I know that that is a procedure adopted at many sanatoria for the treatment of consumption. I did not know that the Indian prisons were run on the Nordrach system. I do not want to exaggerate the value of the inference to be drawn from these figures. But these figures justify the remark of Mr. Bezanji in his evidence before this Commission that "those accustomed to mill life regard it as worse than jail life." I do not claim that these figures in themselves absolutely prove the existence of physical deterioration in the mill operatives. But at the same time these figures taken along with the other facts I have mentioned establish a strong suspicion that the long working hours have caused physical deterioration in the workers.

The evidence of the medical witnesses also indicates the existence in their minds of a belief as to the evil effects of long hours on the health of the mill-hands. Out of 36 medical witnesses examined by the Commission only 27 have expressed a definite opinion as to the necessity

or otherwise for a legislative restriction of the working hours. Of these 23 are in favour of such legislative restriction, while 4 are against it. Out of the 23 medical witnesses who are in favour of legislative restriction 15 have said that they have observed no physical deterioration in the operatives. And yet they advocate legal restriction of the working hours of adult males. After all if the State is prepared to protect the health of the mill operatives the proper time to take the necessary measures for affording such protection is not after the workers have broken down and human wrecks are scattered all over the country. The proper time for interference is before such calamities have happened. The almost unanimous opinion of the medical witnesses who testified before the Factory Commission declares that the time for such interference in India has come.

The influence of long hours on the supply of labour.

I shall next consider the evidence as to the injury done to the industry by the long working hours in textile mills. The inordinately long hours in the Indian mills have been established only within the last few years. And yet already their evil influence is beginning to be felt both on the workers and on the industry. Every man who was tempted to work these long hours by the promise of higher wages, not only did a physical injury to himself but helped to enforce equally long hours on every other factory labourer in India. The methods of modern factory labour are such that the conditions of labour of even a single operative react upon those of all others. In a factory which works for 14 hours a day it is unlikely that a labourer who is only able to work 12 hours a day will be given any employment. In the large majority of cases the individual worker in Indian mills is deprived of any choice as to the conditions of employment. In India with a race of people not over-strong physically, coupled with an enervating climate, a large proportion of the working classes find mill labour as it is carried on at present far too much for their strength. And the result has been that a very large number of labourers do not attempt mill labour at all, or try it for a very short time and give it up for good as they find it beyond their physical endurance. This fact explains the shortage of labour which is complained of everywhere. I have hardly come across a textile mill in India which was not always short of labourers. And yet India is a country teeming with poor people. We have enough of labourers here to send out to South Africa and West Indies and a number of other British colonies. But the mild Hindu with his conservative habits and stay-at-home tendency does not choose to work in the Indian mills, earn his living, and remain in his native country. Why? Mr. S. H. Fremantle, I.C.S., who was deputed to report on the supply of labour in the United Provinces and in Bengal in 1906 wrote thus in his report :—" One cause for the unpopularity of mill labour is undoubtedly the distaste for the discipline which has necessarily to be maintained in a large concern, coupled with confinement for long hours in the mill. Discipline in most mills is no stricter than it need be, and education may do much in course of time to mitigate the natural aversion felt towards it, but confinement for long hours is a matter within the power of mill managers to control . . . . .

there was no complaint until the introduction of electric light. Electric light has now been installed in nearly all the Upper India and Bengal cotton and jute mills. . . . Some use their power with moderation and do little more than add an hour or two to make the short winter days equivalent to the long days of summer. Others, however, have no such scruples. In September when the day breaks before 6 I found one mill using the electric light to work up to 9 o'clock at night and several were running up to 8 P.M." Mr. Fremantle's observations have amply been confirmed by others. In Calcutta over 90 per cent. of the operatives in jute mills come from outside Bengal, not because Bengal has an insufficient supply of workers, but because the Bengali workers cannot stand the strain of work in the jute factories. In the Punjab again 95 per cent. or over of the workers in the cotton textile factories come from outside the Punjab. But curiously enough in the non-textile factories in the Punjab—the flour mills, the ginning factories, etc., we found a large proportion, if not nearly all, Punjabi workers. I asked the Hon. Mr. Har Kishen Lall of Lahore for an explanation of this apparent boycott of the cotton mills by the Punjab labourers, and he told me that the Punjabi did not like to stand up and work these long hours in the cotton mills. If these explanations are correct, and I see no reasons to doubt them, the long hours are to a very large extent responsible for the shortage of labour complained of everywhere in the textile mills in India, and which is acknowledged to be a great obstacle in the way of the further development of Indian industries. The evil is quite manifest and is keenly felt both by the labourers and their employers. And yet neither party has done anything to mitigate it. It is an industrial injury done to the working classes and it certainly is against the interests of the employers. But as Mr. Walker has very clearly pointed out in his work on Political Economy "the working classes, unless protected in an unusual degree by political franchises, by the influence of public education, and by self-respect and social ambition, show a fatal facility in submitting to industrial injuries." And as to the self-interest of the employer being sufficient to secure wise action on his part Mr. Walker says "mankind, always less than wise and too often foolish to the point of stupidity on the one hand, or of fanaticism on the other, whether in politics or domestic life, in hygiene or in religion, do not all at once become wise when industrial concerns are in question."

Under these circumstances every one connected with the textile industry in India, millowners, mill managers, factory operatives, factory inspectors, both lay and medical, have all become convinced that some sort of limitation of the working hours of mill is necessary. Mr. Fremantle, I.C.S., in his report on the supply of labour says "almost all admit that the long day is an evil that they would restrict it to a maximum of twelve hours if other mills did the same. This, of course, can only be effected by legislation as experience proves that agreements among millowners themselves are not invariably adhered to when they conflict with the interests of individuals. For this reason most managers would welcome some legislation in the matter." The Millowners Association of Bombay at their meetings held both in

April and August 1905 decided to keep the hours worked in their mills within reasonable limits, but were not able to keep to their resolution beyond a very short time.

Opinion of mil lowners and managers on restriction of adultl abour.

Before this Commission 16 millowners and 42 mill managers appeared and gave evidence in favour of a legislative restriction of the working hours of adult male operatives. The large majority of the witnesses examined by us were connected with the mill industry either as owners, agents, or managers. And yet there were 97 witnesses who favoured a legislative restriction of the working hours of adult males against 103 who were opposed to it, while the mill operatives were practically unanimous in asking for legislative protection. It would be unreasonable to expect a majority of the millowners and agents to ask for legislative interference to restrict hours of adult labour, especially in a country where a large number of them receive their remuneration calculated on a percentage of production and not of profits. Under conditions like these the fact that 16 millowners came forward to advocate legal restriction of adult working hours as against 34 who were opposed to it shows the remarkable extent to which the opinion in favour of State interference has grown and spread even in quarters where one would expect nothing but the most determined opposition to such a proposal. Coming down to the managers 42 are for legislative restriction and 49 are against, while among witnesses unconnected with the industry 39 are for and 20 against State interference. Apart from numbers, the advocacy by Messrs. Tata and Sons of Bombay of a legally restricted day for all factory workers has impressed me, personally, with the practicability and reasonableness of the demand. Messrs. Tata and Sons are among the largest firms of manufacturers in India, and just now they are about to launch out into a practically new department of industrial activity in this country. When the pioneers of the new iron and steel industry in India who are also among the foremost cotton manufacturers in this country voluntarily come forward with a proposal to restrict the hours of adult labour by legislation, it may reasonably be assumed that the proposal that they make is one which in their opinion will be for the benefit of the industries in which they hold such a supreme position.

I am inclined to accept the opinion of Messrs. Tata and Sons as a guide in matters connected with Indian industrial questions not merely on account of the magnitude or variety of their manufacturing enterprise, but also for the comparatively rare combination of humanity and benevolence with sound business principles, which they have achieved in all their undertakings. In my humble opinion a manufacturing firm which never sweats its workmen, but on the other hand treats them with humanity and kindness, and provides them with dwellings, and encourages them with prizes and other rewards for honest work, and steady and persevering industry, has more claims to be heard on questions regarding the relation of capital and labour than another which has its eye only on its production and profits and which patiently waits for the

City Improvement Trust to provide dwelling-houses for its workmen. The manufacturers who told us in Bombay that they did not care to invest money on building workmen's quarters as it would only bring them a return of 2½ or 3 per cent. at the most, while if they invested their money in cotton mills they were practically sure of a return of 25 per cent. per annum, may be excellent business men in their way, but in my humble opinion are scarcely the sort of people under whose unfettered control the comfort and well-being of thousands of Indian labourers can be entrusted. As I have already pointed out there is now a general consensus of opinion that the long hours in the textile mills ought to be regulated in some way or other. And my colleagues on the Factory Commission have also come to the same conclusion. Like them I also would not advocate direct legislative restriction of adult hours if some other less drastic measure would answer the purpose equally well. With that view I have very carefully considered the proposal put forward by the majority of my colleagues for creating a class of young persons with hours of labour restricted to 12, and have come to the conclusion that this proposal will not reduce the hours of adult labour in all the textile mills in India. The majority of the members of the Commission are sanguine that their proposals will restrict the hours of all textile mills to 12 a day and thus indirectly gain the object of regulating the working hours of these mills. I am emphatically of opinion that the proposals of the majority of the Commission will do no such thing. If factory inspection is carefully done the proposed "young persons" class will afford protection to the young persons only. The adults will remain where they are, absolutely unprotected. My reasons for so strongly dissenting from the majority of my colleagues on this point are as follows :—

Objections to the young persons class.

The proposed "young persons" class will not affect the weaving departments of textile mills as there are very few young persons engaged in that branch of the industry. This has been admitted by many managers and millowners who gave evidence before this Commission and it has been confirmed by our own observation. In England women largely work in textile mills, and the control of their hours along with those of young persons and children effectually control the working hours of the mills. But in India women in textile mills are generally confined to the reeling department. Out of many thousand weavers we have seen during our recent tour of inspection we only came across 3 women weavers. So that the weaving department without women, young persons, and children will be practically uncontrolled so far as hours of work are concerned. But it has been put forward that weaving departments could not be worked encnomically independently of the spinning department and so the hours of the spinning department will practically control those of the weaving. This argument is absolutely futile. There are any number of purely weaving mills in England, and even in Bombay there is one such. Hitherto as the cotton spinners in India mainly manufactured yarn for sale in India, China, and other countries, weaving occupied a comparatively subordinate place in the cotton textile mills. But of late years the development of the *swadeshi*

spirit both in India and China has made the demand for cloth in India greater and the demand for Indian yarn in China less. The result of this twofold process has been and will continually be to give greater impetus to the manufacture of cotton cloth in the Indian textile mills. Under this new impetus weaving mills will spring up or new weaving sheds in old mills will rise, worked, it may be, by separate machinery, as is done in the Empress Mills at Nagpur, or it may be that even where the spinning and weaving departments are worked by the same engine, the weaving department will work longer hours than the spinning, as it is now being done in the Bengal cotton mills in Calcutta. Thus it is evident that the new proposal will not restrict the hours of work in weaving mills or weaving sheds, and one important branch of the textile industry will again be left free to work as long hours as it likes. Then as to spinning, a number of millowners and managers have declared that in case the hours of young persons are restricted, they would do away with the services of such protected persons and work the mill with adults wherever possible.

To quote the opinions of a few—

(1) Mr. Chimanlal Nagindas of Ahmedabad, representing the Ahmedabad Jubilee Spinning and Manufacturing Co. and the Ahmedabad Manufacturing Co., deposed on cross-examination: "Personally he would have to dismiss these workers, as the young persons would not consent to work half-time and they would not be allowed to work full adult hours.

(2) Mr. A. K. Leslie, of Greaves Cotton & Co., Bombay, said: "the creation of a class of young persons would in certain cases have the effect of restricting the working hours, but in those mills where young persons are not largely employed they would have to go."

(3) Mr. Baptist, Manager, Morarjee Gokuldas Mill, Bombay, said: "It was difficult to say whether mills could obtain adults in the place of young persons, but he should personally do his best to get adults."

(4) Mr. Gordhandas Khatau, of Khatau Muckenji Spinning and Weaving Co., of Bombay, said: "In his opinion the formation of this class would mean that mills would try to work with adults only."

(5) Mr. E. John, Millowner, Agra, said: "He would have to get adults to take their (young persons') places.

(6) Mr. Thornley, Mr. John's, Mill Manager, Agra, said: "that he thought they would be able to get the extra adults."

(7) Mr. A. Butterworth, Manager, Cawnpore Woollen Mills: "If the young persons class were created they could replace the 220 young adults affected by full age adults and so work the mill."

(8) Mr. G. E. Sutcliffe, Manager, Sholapur, said: "If the young persons were limited to 12 hours work, it might be possible, though difficult, to run the mill beyond those hours. The young persons class would make a difficulty which could be got over by a little contrivance."

I have quoted above from the evidence given before the Commission by millowners and managers from Ahmedabad, Bombay, Agra, Cawnpore, and Sholapur. They all say that the young persons *could* be replaced by adults, and what is more they *would* be so replaced, and some at least of the mills would thus run for longer than 12 hours. I am not a cotton manufacturer, and so on a practical manufacturing point like this I accept the opinion of these practical men, voluntarily expressed. From what I have seen, this substitution of adults for young persons ought to be more easy in mills with mule spinning than those with ring frames, as the percentage of young persons in such mills is very low. And it is a curious coincidence that some of the mills which are the worst offenders in the way of working very long hours are fitted with mules, with only a very small number of ring frames if at all. Those mills are almost certain to escape the indirect restriction attempted to be imposed through the medium of the "young persons" class. And even some of the mills with ring frames and their 25 or 30 per cent of young persons would, as far as I can make out from the opinion of practical manufacturers, get rid of them and try to work with adults. It may be objected that the conditions of labour market are such that it would be impossible to get the extra number of adults required. Mill managers and owners know how best to obtain the labour they want. Mr. G. Khatau, of the Khatau Muckenji Mills, says that "if a young persons class were created, one mill will steal adults from another mill and run for a longer time." Then again, as pointed out by the Textile Factory Committee in their report, "adults who have worked a whole day would frequently work all night in another mill in which wages are paid daily, thus securing money for immediate wants and that these men would absent themselves from work during the succeeding day or days."

In spite of all these attempts to get adult hands to replace the young persons a certain number of mills may fail to secure the extra hands necessary to make them independent of the young persons. Then we shall have two sets of mills in the country, one which has been able to get rid of all its young persons and replace them by adults and at liberty to work as many hours as it likes and the other whose hours are controlled by its young persons whom it could not replace. A more unfair regulation it would be impossible to conceive. It will be handicapping one set of mills against another and the economic injury involved in the process will be very great indeed.

I have been reminded that the restriction of children is also an element that must be taken into consideration. To a certain extent, perhaps, it is. But I remember that the total number of children employed in the Bombay mills is only about 2½ per cent. of the total number of operatives. I am also aware of the fact that some of the best

spinning mills in Bombay like the Century Mill are run without the aid of a single half-timer. The Century Mill employs 2,475 men and 425 women and no children. Mr. C. N. Wadia, its managing agent, told us that the young persons only amount to 15 per cent. of the total mill operatives. Mills like the Century are entirely unaffected by the restriction on children while they ought easily to be able to replace their 15 per cent. young persons by adults.

It might appear to a casual observer that the restriction on adult male labour is a worse handicap on the industry than the indirect restriction imposed through the young persons class. But as a matter of fact the young persons class will in the long run crush the Indian textile industry in competition with China and Japan. In Japan the cotton mills are already working 22 hours a day by two shifts of 11 hours each. To compete successfully with Japan our cotton mills may have to work equally long hours. If adult labour be restricted by direct legislation, mills could work night and day by two shifts of 12 hours each.

But if the working hours of mills are to be controlled through the young persons class, then the period between which the members of that class are permitted to be employed must be fixed. According to the proposal of my colleagues that period is fixed between 5-30 A.M. and 7 P.M. If that proposal is adopted then those mills which are unable to work without their young persons will be prevented from working night and day with changing shifts. Thus it is evident that for some of the Indian mills, at all events, the young persons class is a more severe handicap than direct adult restriction. But my colleagues have suggested that power might be vested in the Government of India to extend the hours within which young persons may be employed whenever the demands of the manufacturing industry justified such extension. Such power will, of course, be only exercised when demand is great and the necessity for working the mills for long hours is clearly proved.

It is exactly at such junctures that the millowner is likely to sweat his workers. The moment the Government of India relax the limit for the employment of young persons, they will be worked in shifts while the adults will most certainly be sweated by being worked 16 or 17 hours a day. The young persons class can only indirectly restrict the hours of adult labour by restricting the hours of the mill in which they are employed. The proposed class of young persons will either greatly hamper the industry by restricting the working hours of mills or where they do not do that will be ineffectual in preventing the sweating of adult workers. The proposal of my colleagues will impale the industry on the horns of a dilemma. A more disastrous proposal it is impossible to think of.

It is proposed that any mill which declares its working hours to be 12 a day should be exempted from all obligation to get its young persons medically examined and certified or to keep a separate register of young persons. And at the same time it is proposed that certain departments of these mills which have declared a 12-hour day, such as the boiler room, calendaring, etc., should be exempted from the operation of the 12-hour

working day declaration. In other words certain departments of such mills will be permitted to work more than 12 hours a day. What is to prevent mill managers from employing young persons in these departments for more than 12 hours a day. The Factory Inspector will have no evidence that any operative in such mills is a young person, for there is neither medical examination nor registration of young persons in such mills. If the Inspector suspects any one to be a young person who is employed in calendaring for more than 12 hours a day it is open to the mill manager to say that to the best of his knowledge and belief that operative is over 17 and consequently a fully mature adult. Where is the protection for young persons under such an arrangement, not to speak of adults.

The proposal of the majority of the Commission to create a class of young persons has found favour with very few of the millowners, agents, managers, civil surgeons, Government officials, or other witnesses who gave evidence before the Commission. The majority of the witnesses were cleverly cross-examined by some of the members of the Commission with a view to elicit their opinions as to the advisability or otherwise of creating a class of young persons with hours restricted to 12. And witness after witness rejected the proposal, and many said that if any restriction is to be imposed by law they would prefer a direct restriction of the hours of adult labour to the creation of the proposed class of young persons. To say that the witnesses did not clearly understand the point put to them is not complimentary to the intelligence of the witnesses who appeared before us or to the powers of lucid exposition of the majority of the members of the Factory Commission. As a matter of fact the point was very clearly put to the witnesses and they thoroughly understood the intention and effect of the proposal.

But the result of the long cross-examination on this point is that out of something like 78 witnesses examined by the Commission on this point 22 have given their support to the creation of a young persons class with hours restricted to 12. Comprised in this 22 are 7 millowners, 9 mill managers, and 6 others. Comparing these figures with the 16 millowners, 42 mill managers, and 39 others who supported the direct restriction of adult hours, I do not feel that I have done anything by preferring the direct restriction to the indirect means and uncertain result of the young persons class to deserve the designation of "impracticable theorist." If I am an impracticable theorist I am glad that I am in good company. For the Government of Bombay in their note to the Factory Commission say :—"Government has no proof that the creation of such a class (young persons) is necessary. If the object is to secure shorter hours for the adult workers it might involve less interference if a direct legal limitation of hours were imposed. This course would involve less interference and cause less trouble to all concerned." That opinion given by the Government of Bombay, which of all the Local Governments of India had perhaps the most to do with factories, I am quite content to accept.

The suggested class of young persons, will not curtail the hours of working of the majority of textile mills to 12. Speaking generally,

this class is not wanted by millowners, mill managers, mill operatives, or others. A few instances of young persons detected by the Commission who were unfit for a full day's work could easily be met by enforcing a physical fitness test before a half-timer becomes a young person. The proposed class will serve no purpose except perhaps to help the manufacturers to put off "the evil day" when restriction of the hours of adult labour is certain to come. A young persons class and the policy of *laissez faire*, so far as adults are concerned, are all right in England where the adult workers know how to combine and protect their own interests. But in a country where the workers are illiterate, with little or no combination among themselves, with no education to enlighten them, with no capable leaders to guide them, and no franchise to protect them, the State must either step in and protect the helpless workers or stand by and watch the gradual breakdown and ruin of the labouring classes entrusted to its care.

My colleagues are emphatically of opinion that the labour conditions in India are not in any way comparable with those existing in the United Kingdom. And they say: "We strongly deprecate any attempt to apply the laws and regulations governing factory labour in the United Kingdom as such to India." These are excellent sentiments, and I cordially agree with them. But what is the creation of a young persons class with limited hours of work but a blind copy of the English Act? What is the attempt to curtail the hours of labour of adult labourers by the indirect means of curtailing the hours of work of young persons and women, but a repetition of the methods of English Factory Legislators? And above all what is the objection to the restriction of the hours of adult labour but an echo of the plea of English capitalists who have desperately clung to the antiquated *laissez faire* doctrine of the Manchester school of political economists. "Why should the hours of adults be restricted here? It is not done at home" is a statement I have heard more than once in the course of these inquiries. The reply to that question is furnished by the admirable principle enunciated by my colleagues but which unfortunately is not exemplified in their proposals.

Having disapproved of the suggestion for the creation of the young persons class with hours restricted to 12, I now beg to put forward the proposal to restrict the working hours of all male labourers in factories to 12 a day. I believe this proposal, if adopted, will put a stop to the long hours the operatives are now being worked in the textile factories in India.

Legislative restriction of the hours of adult male labour.

This is one of the recommendations made by the Textile Factories Labour Committee which was presided over by Sir Hamilton Freer-Smith. I entirely concur with the opinion expressed by that Committee on this point. But in the course of our investigations many witnesses who were connected with the textile industry, and some who were not, objected on principle to any legal restriction on adult male labour. These gentlemen evidently held the view that the State ought not to interfere with adult labour no matter what the conditions were under which such

interference was contemplated. Some witnesses travelled from principle to precedent and maintained that since such a thing as restriction of adult male labour had not been done in any country in the world, it ought not to be done here. The appeal to both principle and precedent seems to have been made under a grave misunderstanding. None of the great writers on the subject has ever denied the right of the State to interfere with adult labour under certain conditions. Even Adam Smith, who has been very much misunderstood on this point, admits the right of every man to pursue his own interests in his own way only as long as he does not violate the laws of justice. Both in France and in Switzerland adult labour has been the subject of legislation. In the former country the hours of adult labour have been restricted to 12 and in the latter to 11. In Switzerland there is a clause in the federal constitution of 1874 giving the Confederation the right "to enact uniform regulations upon the work of children in factories, upon the duration of the work of adults therein, and for the protection which should be accorded to work people employed in unhealthy and dangerous industries." Even in England State interference with adult labour is not unknown, although as yet it has been exercised to a very small extent. I believe that in England operatives working in bisulphide of carbon (used in the vulcanising of India rubber) are restricted to 5 hours of work a day by special rules; and similarly I understand that in lead-smelting works only a two hours' spell is permitted in the flues. And the Railway Regulations Act of 1895 gives the Board of Trade power, whenever it considers the hours of labour of any railway servants too long, to require the Railway Company to prepare a new schedule of hours to the satisfaction of the Board, under heavy penalties for non-compliance. There is scarcely any necessity to go further into these precedents. Even in the absence of any precedents, under the special circumstances of a country it may be justifiable to undertake legislation to control the hours of labour of its adult factory operatives.

Want of combination among the operatives.

Now what are the conditions existing in India which necessitate State interference. In the first place there is little or no combination among factory workers. This has been acknowledged on all hands. The Collector of Bombay in his letter to the Bombay Government, dated 25th November 1905, observes:—"If the millowners desire to increase the hours, the operatives have no real power to prevent them. Their power of combination is as yet exceedingly limited; a large proportion will always continue to prefer to get as high wages as they can, regardless of their own welfare in the long run; and finally the system of withholding pay and of inflicting fines render the great mass of the workmen helpless to resist the far more intelligent class which exercises authority over them. Legislative sanction and official inspection can alone enforce short hours and punish the non-observance of them." This opinion of the Collector of Bombay—the man on the spot—is practically corroborated by the opinion of the majority of the Commission who say that the operatives "are as yet unable to combine over any large area with the object of securing a common end by concerted action." The explanation of the fact that although excessively long hours were worked

in the Bombay mills on pay which was inadequate for the altered circumstances of the case, the operatives remained quiet and submitted to the long hours, is plain. It was due to their absolute helplessness to enforce a reduction of the working hours. Owing to want of combination the stronger and more avaricious among the operatives would remain on and work the long hours in order to earn all they can. The weaker among the workers who are both unable and unwilling to work the longer hours have no means of compelling their employers to reduce the number of working hours. They were disorganised units who had to choose between two evils—either to work the long hours or to give up their work. That is where the tyranny of the existing conditions comes in.

It is true that here and there isolated strikes take place in mills and sometimes the strikers get what they want. Is it not a well-known phenomenon in the industrial world that in times of great demand employers readily give in to strikes or even threats of strikes? And do they not when the demand slackens once again take prompt steps to regain lost ground? For all practical purposes the Indian mill operatives are without effective combination among themselves to act together in an emergency to secure a common end. And unless workers are protected either by combination among themselves or by the interference of the State, acting merely as individual units, they are placed at a considerable disadvantage in bargaining with their employers. With little self-confidence and less education the theoretical "freedom" of the Indian mill operative is very delusive. Through his weakness of will, ignorance, and his habit of submission to his social superiors, the Indian operative in his bargaining with his employer loses all the advantages of free competition, and suffers deep and permanent economic injury.

Physical deterioration.

Secondly.—That existing conditions are injurious to the health of the operatives. I have already explained at length my own views and observations on the subject. The majority of the members of the Factory Commission also admit in their report that "if the life history of a considerable number of the operatives working under these conditions could be traced to its close, it is probable that there would be evidence of premature exhaustion." They also express their opinion "that the very long hours worked in many mills in the past and in some mills at present are calculated to produce physical deterioration; if generally adopted or persisted in for any length of time they would undoubtedly result in the physical deterioration of the operatives." So with the strong suspicion that these long hours have already affected the physique of the operatives, and with the certainty that if persisted in they will result in the physical deterioration of the workers, it clearly becomes the duty of the State to effectively prevent these long hours. And as I have pointed out at length that the remedies suggested by the majority of the Commission will not restrict the hours of all textile mills within reasonable limits direct restriction of adult hours becomes an absolute necessity.

Thirdly.—The workers are practically unanimous in asking for a legislative restriction of their hours of labour. The evidence of the operatives taken by this Commission points that way. And the evidence taken by the Textile Factories Labour Committee also indicates it. The workers themselves on more than one occasion have submitted memorials to His Excellency the Viceroy praying for legislation to restrict their hours. Their last memorial was, I believe, dated 24th September 1905. The evident desire of the workers for restricted and fixed hours and their absolute helplessness to secure them without legislation constitutes another strong ground for State interference.

Opinions of operatives on legal restriction.

Fourthly.—In India it is not only the mill operatives who desire to bring down the working hours within reasonable limits but the millowners are also desirous of achieving that result. The resolution of the Millowners Association on more than one occasion to curtail the working hours in the mills in Bombay and their failure to carry it out is another extraordinary circumstance which justifies, nay calls for, State intervention. There are millowners who would voluntarily curtail the working hours in their mills but are afraid of the competition of others who may work long hours. These are precisely the conditions which wise statesmen have declared to justify State interference. In the Life of Cobden, the distinguished biographer uses these words, "Can the relations between labour and capital be safely left to the unfettered play of individual competition?" The answer of modern statesmanship is that unfettered individual competition is not a principle to which the regulation of industry may be entrusted. There may be conditions which it is in the highest degree desirable to impose on industry, and to which the public opinion of the industrial classes may be entirely favourable. Yet the assistance of the law may be needed to give effect to the opinion because—in the words of the great man who was now preparing the exposition of political economy that was to reign all through the next generation—only law can afford to every individual a guarantee that his competitors will pursue the same course as to hours of labour and so forth without which he cannot safely adopt it himself.

Opinions of employers on reduction of working hours of mills.

These are the grounds on which I recommend legal restriction of the hours of adult male operatives. It has been pointed out that it would be impossible to carry out the restriction of adult labour in India, as the number of exceptions to be granted for overtime working will be enormous, and the number of Inspectors required to enforce the restriction will also be great. The difficulties under both these heads are in my opinion exaggerated. What the cases are in which overtime working ought to be permitted must be carefully drawn up in consultation with experts who are familiar with the wants and methods of each industry And in India it would be more practicable to lay down that permission must be obtained from the local authority to work overtime. The Swiss rule of obtaining permission from the local authority will be more suited to the conditions existing in this country than the French

rule of making the Factory Inspector the authority to grant the extension. The local authority in India will have to be the Collector or the Divisional Officer. Even with an absolute adult restriction in Switzerland the Factory Inspector or his assistants or all together do not visit a factory, on an average more than once or twice a year.

We have heard a great deal about adult restriction hampering the infant industries of India. The question of the effect of a 12-hour day on production has been clearly dealt with in the report of the majority of the Commission. Indian experience in this respect coincides with the experience of other countries that reduction of the number of working hours does not necessarily mean decreased production. Curtailment and fixation of the hours of labour may on the contrary give better production and would, certainly, eventually tend to more uniform output and, to some extent, assist in modifying the serious fluctuations of business which are baneful alike to master and man. At the present time when the cry of industrial regeneration of India is in the air it may not be a very popular policy for an Indian to advocate restrictive industrial legislation for his country. But I doubt it, to shout with the biggest crowd is always the wisest course to pursue. I feel convinced that those of my countrymen who have bestowed any thought on the subject will approve of my proposal. Mere increase of wealth will not solve the problem of the poverty of India unless something is also done at the same time to alter the proportions in which the wealth is distributed. In the anxiety to increase the national wealth, to sweat and crush the labouring classes will certainly not help to further a more equitable distribution. I must also in this connection confess, with shame, that in my tour throughout India I found that my countrymen as a class were more unsympathetic and hard employers of labour than the European manufacturers. Of course there were many notable exceptions. But speaking generally the labourers fared worse under Indian employers than under the European. Even some of the most enlightened and educated Indian gentlemen, with whom I discussed industrial questions, had not a single word of sympathy with the labourers to express. They were all anxious to make up for lost time and to push on their industrial ventures and to accumulate wealth. But as for the workers, they were part of the machinery of production and nothing more. To me this discovery came as an unpleasant and disheartening surprise. But it is the truth, and, in my humble opinion, it will be an act of doubtful political wisdom to leave the many hundreds of thousands of Indian labourers to the tender mercies of the manufacturers who are supposed to be nursing the infant industries of India. I beg to submit with all the earnestness I can command, my recommendation to extend to the mill operatives in India the legislative protection which they so earnestly pray for, and which, God knows, that they so sadly stand in need of.

Section II.—*Women.*

The next point on which I differ from the majority of my colleagues is the raising of the hours of labour for women employed in factories

from their present limit of 11 a day to 12 ; and the reduction of their present hours of interval or intervals amounting to 1½ hours to ½ an hour.

This was one of the main questions to the Indian Factory Commission of 1890. A majority of that Commission strongly recommended that no restriction should be put on the working hours of women, and were of opinion that it would be very hard on the poor women labourers to be told that they could not work for "12, 13, or 14 hours." Mr. Sorabjee S. Bengalee, C.I.E., one of the members of that Commission, strongly dissented from the view of the majority on this point. In the debate on the Factory Act Amendment Bill in the Viceregal Legislative Council in 1891, some of the representatives of the manufacturing interests strongly supported the opinion of the majority of the Commission. But the Government adhered to their proposal to restrict the hours of adult women to 11 a day and that proposal became law. Now, my colleagues make the proposal—in my humble opinion a retrograde proposal—to raise the hours of labour for women to 12 and reduce their hours of rest from 1½ to ½. This proposal evidently is based on a new discovery and an old argument.

The new discovery is that the factory women in India are all of good physique, that in the majority of cases they work less than the maximum of 11 hours a day, they are permitted to work, and in the opinion of some of the witnesses they are capable of working for 12 hours. But the excellent health of women factory operatives in India at the present time is the result of the short hours they are now worked. The majority of them are employed in hand reeling and are paid by piece work. Their irregular attendance does not interfere with any other labourers in the mill or with the progress of any manufacturing process. So they come when they like, go when they like. The reeling room containing no dangerous machinery they in some cases bring their infants along with them to their working room. All these arrangements are very suitable to women's work in this country, and so they are the one class of factory operatives in India who have managed to earn their living without ruining their health. For this blessing the factory women in India are indebted to the Factory Act of 1891 which was passed against the opposition of the manufacturers. The new proposal regarding women, if carried out, "will increase her hours and her health destroy." And this retrograde measure is to be taken because it is alleged that restricted hours for women handicap them in competition with men, and that if women's hours are made the same as those for men, they would have the chance of getting employment in all the departments of a textile mill, instead of being confined to one or two departments as at present. The argument that restriction of the hours of women does injuriously affect them in competition with men is a very old one, the fallacy of which has been exposed times without number. Curiously enough the argument always proceeds from manufacturers. Men and women in Indian factories do not compete for the same employment. In the few instances of some mills in Upper India where men and women are employed side by side in the reeling room we have come across a number of instances where women in spite of their restricted hours made more money by piece work than their fellow male reelers. The large majority of factory women

in India will never under any conditions work alongside of men in the spinning room or weaving shed. A small percentage of low caste women like the pariah women in Pondicherry may accept work in all the departments of a mill and work alongside of men of all castes. But the large majority never will. And in the case of the minority the present opportunities they possess of attending to their household duties and of nursing their babies will be practically lost. At present whatever the hours of starting and stopping of a mill may be, women seldom turn up before 7 and seldom stay at their work after 6. This gives them time both in the morning and evening to attend to their household duties. In many mills the women workers do not take advantage of the $1\frac{1}{2}$ hours' rest they are entitled to under the law. They voluntarily give it up for the privilege of coming late and going home early. It is one of the rules in Switzerland that women workers may either have a long interval and work the full number of hours permitted for women or have a short interval and go home earlier. The women workers here have unconsciously adopted the Swiss rule and in most cases have given up their long interval of rest in exchange for a late start and an early finish. The contention that under the proposed rule the hours during which a woman will be away from home are decreased rather than increased is a thereotical statement which does not hold good in practice. Will any manager permit a woman spinner, let us say, working in the ring frames, to turn up for work at 7 A.M. when the mill starts work at 5-30 A.M. The entrance of women into the work of all the departments of a mill will necessarily bring them under stricter discipline as to hours of attendance and so forth, and if along with this their intervals which now amount to $1\frac{1}{2}$ hours a day is also cut down to $\frac{1}{2}$ an hour, their health, their domestic and maternal duties will all be affected at the same time. In general competition with men if women suffer, they do so from their deficiency in industrial capacity and technical skill. And these defects cannot be corrected by longer hours, for long hours and good work are rather antagonistic than concomitant. The proposal of the majority is calculated in my humble opinion to do a great deal of social and physical evil to the women workers without appreciably improving their economic condition. Women workers in ginning factories which are not under the Factory Act and whose hours are not restricted are not one bit better off than the women in ginning factories which are under the Act. The former have to work for 16 and 17 hours a day for their 3 annas, while the latter can earn the same wage in about 12 or 13 hours, which by a series of intricate calculations can be proved to be equal to 11 hours.

I protest against this proposal on physiological, economical, and eithical grounds. It will be a great calamity if the present hours of work for women in factories were to be increased or their authorized hours of rest cut down.

Women in ginning factory.

Another proposal of the majority of the Commission regarding female labour from which I feel compelled to dissent is the proposal to permit night work for women in ginning factories. The objections to the employment of women at night in factories in general applies with equal force to their employment in ginning factories. The injury to

health, the disruption of domestic life, neglect of children all come into operation whether a woman is engaged in a spinning mill or a ginning factory. In addition to these, attempts against her chastity are likely to be more common outside the ginning factories, which are generally solitary structures in lonely parts of the country. When we were inspecting one of the rice mills in Rangoon a number of Madrasee cooly women employed in that mill complained to me that when they worked during nights at the mill they were often molested by men labourers whenever they went to the latrines in the dark. The obvious reply to this will be why don't they complain to the mill authorities.

But any one who knows the difficulties that a poor cooly woman has in proving her allegation before the authorities will recognize the probability of her more often failing to establish her case than of securing the punishment of the culprit. It is not an uncommon result in such cases for the women complainant to come out with her moral reputation damaged and for the cowardly male assailant to escape all censure or punishment. Under these circumstances the factory women in India employed at night has either to give up her work, or like the generality of her sex, excepting the suffragettes, to suffer in silence. The hardships and injustice of making women work in factories at night are very great, and before a proposal to employ them at night is made, sufficient justification ought to be shown. Now, what are the grounds on which the proposal is made? It is stated that the busy season in ginning factories is short, and the work in them is both easy and adapted for women, and that if women are prohibited from working at night it will be difficult or almost impossible to find men to work at night in the ginning factories. But none of these reasons explains the necessity for work at night.

To a very large extent—there may be exceptions—the necessity for night work is artificially produced. It is not altogether the result of large quantities of cotton coming to be ginned all of a sudden and the factories in the district finding themselves unable to cope with the work extending their operations through the late hours of the night into the early hours of the morning. In most of the ginning centres in India there is a system of combination among gin owners, where they pool the profits whether they work their factories or not. Under such a system "it is not uncommon," says Mr. J. Walker, I.C.S., C.I.E., Commissioner of Nagpur, "in a town containing several ginning factories for one or two to be working by day and night shifts, and for others not to be working at all, but to be sharing in a pool of earnings." Such night working Mr. Walker condemns as unjustifiable. And it will be found that night work in ginning factories prevails most in those districts where there is combination among owners. Mr. R. D. Bell, I.C.S., Assistant Collector of East Khandesh, in his evidence before the Factory Commission urged that night work in ginning factories ought to be permitted for women as it was a necessity. But in cross-examination he admitted that "there were more gins and presses in East Khandesh than were necessary for the cotton crop there, so there was no great necessity to work at night." Then again take the Punjab where there are a large number of ginning factories with very little of combination.

Mr. Hamilton, I.C.S., representing the Government of the Punjab, stated before the Factory Commission that the normal working houis all over the Punjab in ginning factories were from 6 A.M. to 7 P.M. with 1 hour's interval in the middle of the day, or a 12-hour day with little or no night work. The question, therefore, arises as to whether when a rule declaring, that women ought not to work in factories at night, is generally accepted any departure from that ought to be made to help any combination among gin owners formed with the purpose of artificially forcing up ginning rates ? I am of opinion that no such departure ought to be allowed from the general rule. Ginning factory owners are at perfect liberty to combine and to work or not to work their factories. But they must abide by the rules laid down for the guidance of factories in general. Mr. H. W. J. Bagnell, I.C.S., the Collector of Broach, in which district there are a large number of ginning factories, deposed before this Commission to the effect that night work for women in ginning factories ought to be absolutely prohibited. And he further said that in his district there were plenty of male labourers available for night work in ginning factories provided the owners were willing to pay proper wages.

But at the same time I must admit that some important witnesses have advocated night work for women in ginning factories under certain conditions. Mr. P. Hemingway, I.C.S., Deputy Commissioner of Wardha—another important ginning district—has deposed that the "employment of women at night need not be prohibited. But if it is allowed, I would strictly enforce shifts with short working hours and frequent intervals." Even Mr. Walker, Commissioner of Nagpur, concedes this point so far as to say that "to meet cases of genuine emergent pressure, as to the genuineness of which inspectors would have first to satisfy themselves, inspectors might, I think, be authorized to grant special permission for women to work at night for a period not exceeding one month in one year."

Thus even those who are in favour of night working for women—except gin owners—are for taking efficient and stringent safeguards to prevent women being worked 17, 18, or even 20 hours. But the majority of the members of this Commission do not want even such efficient safeguards, and they are prepared to pass a general rule permitting night work for women in ginning factories. They recommend no ascertained shifts but are satisfied with a sort of spurious shift which is utilized in the Khandesh district. The "Khandesh system," I believe, owes its important public recognition to the mathematical genius of one of its ex-Collectors who reduced it to a mathematical formula. He ordered that the proper number of women to be employed in any ginning factory would be represented by the formula—

$$\frac{g \times h}{11} = w$$

where g represents the number of gins in the factory, h the total number of hours the factory works, 11 the number of hours a woman is allowed to work under the Factory Act, and w the total number of women to be employed.

As a mathematical formula it is excellent. But in my humble opinion it has absolutely failed in its practical application, because the mathematical Collector of Khandesh failed to take into consideration the human element involved in his problem. And the human element when it appears in the shape of a ginning labour contractor and his mukhadamie is enough to upset a dozen mathematical formulæ. These disturbing human elements were able to produce registers with the names of the necessary number of women required by the Collector's formula. But the actual number of women available for work in the gins was considerably less. If I may represent it by a formula it was—

$$X = W - (S + r)$$

where *w* represents the women who ought to be available for work S represents the number of sweepers who are put on the register but never work in the gins, *r* represents the female relations of the mukhadamie who are also put on the register but who have not the remotest intention of working in the gins, and *x* the number of women who are sweated to keep the factory going for 16 or 17 hours.

When we were in Jalgaon, the capital of the district where the mathematical formula came from, we were living in our train which was drawn up at a siding. There was a ginning factory not 100 yards away from our train. One morning when it was still dark I heard the engines of the factory going. I lighted a match and looked at my watch. It was 5 o'clock. That factory worked all that day, and at night when the members of the Commission were enjoying their after-dinner smoke the engines of the factory stopped. One of the members pulled out his watch and said it was half past ten. That factory had gone on working for 17½ hours. We visited that factory the next morning and found actually at work enough women to keep the gins going but in a register found a number of other names of women. When asked where they were we were told that they were in their houses. When asked if there was a definite time when a definite worker would be at work or at home it was replied that there was no difinite arrangement like the one suggested, but the extra women came and relieved those at work when they pleased and as they pleased. This is the system which my colleagues think is working satisfactorily in Khandesh. If my colleagues are satisfied with it, I certainly am not. And if the proposal to grant legal recognition to the Khandesh shift or makeshift is accepted, then it will be equivalent in my humble opinion to legalising sweating. My colleagues are good enough to say that their proposal is open to theoretical objection. The Factory Inspector, Mr. McCormack, deposed before the Commission that in Khandesh the time tables drawn up by the gin owners and approved by the authorities "were not worked up to." And if the gin owner did not evenly distribute the work among the women on his list but made one poor woman work for 17½ hours while permitting the mukhadamie's second cousin to sit comfortably at home, how is the Factory Inspector to find it out. This may be a theoretical objection to the

majority of the members of the Factory Commission, but will be unpleasantly practical to the Inspector who wants to discharge his duties in a conscientious manner.

I am convinced that the greatest abuses of any in the factories in India exist in the ginning factories and especially in the smaller ones. And the abuses become all the more horrible as the sufferers here are all women. There are enough of ginning factories in the different ginning centres of India to deal with the cotton produced in these centres at present. And they are every day springing up like mushrooms, to open the factory, to come into the combine, then to shut down the factory and come in for a share in the profits of others in the combine who have actually worked. If every factory is worked for 12 hours a day throughout the season there will be no necessity for night work at all. I am strongly against the proposal to permit women to work at night in any factory whatever.

Section III.—*Young Persons.*

The third point on which I differ from the majority of members of my Commission is as to the necessity for the production of a certificate of physical fitness before a half-time child is allowed to work full time. The present proposals are to make the hours of half-time children 6 hours, and of young persons 12 hours a day. The transition comes at the age of 14, at which a child which had till then worked for six hours a day is all of a sudden to be made to work 12 hours a day. The jump is too high and the risks of physical injury great. In my humble opinion such jump ought not to be taken without a previous medical examination to ascertain whether the young person who is about to attempt to do twice the amount of work which he had been doing till then is physically fit to undertake such arduous labour. Poverty may compel many young man to attempt to do things beyond his strength. Such attempts at gradual self-destruction ought to be checked. I have seen in our recent tours all over India certain number of young adults working in mills who though they were undoubtedly over 14 years of age were not fit to do a full day's mill work. It may be said that cases like those are few and constitute only a very small percentage of the total number of young adults working in the many mills in India. In other words the percentage of young adults who have ruined their health by attempting to do work beyond their strength is so small that it may be neglected. That is the frame of mind in which a manufacturer looks at damaged goods. But here we are dealing not with cotton cloth or woollen material or chemical substances but the damaged items are human beings. In my humble opinion it is the duty of the State to safeguard the health of every one of its subjects. The proposal to exempt mills which declare a 12-hour working day from all obligation to differentiate in any manner between young persons and mature adults may be exceedingly convenient to millowners and mill managers. But if Government permit such a proposal to become the law of the land they would fail in their duty of safeguarding the health of the many thousands of immature mill operatives all over the country. As a medical man who has had

opportunities of seeing mill operatives all over India, I beg to strongly recommend that no young person (*i.e.*, any one between the age of 14 and 17) be permitted to do more than half a day's work in any mill until such person has been certified by a recognized certifying surgeon to be physically fit to do a full day's work.

SECTION IV.—*Children.*

I agree with all the proposal made by the majority of the Commission regarding the employment of children. The reduction of their hours of actual employment to 6 per day, the prohibition of their employment at night, and before they are certified both as to age and physical fitness, the arrangement of their sets and the facilities to be afforded for their education have all my cordial approval.

Outside labourers in factories.

The question as to what classes of labourers are factory labourers who come within the operation of the Factory Act, and what classes are to be considered as outside labourers who are not controlled by the provisions of that Act, is one more of interpretation than of legislation. The labourers who come into a factory either to bring in raw materials or to take away the finished product of the factories, ought not, in my opinion, to be classed as factory operatives, whether they are employed by any contractor or by the millowner himself. But at the same time the decision that the coolies in rice factories who empty their baskets of paddy into the hoppers, directly, are not factory hands because they never go inside the factory building is a legal hair-splitting which I am unable to follow. And when a distinction is drawn between coolies who feed the hoppers with paddy brought from the mill godown, and those who feed them with paddy brought direct from the barges, it is a distinction, to my mind, without a difference. However, as I have already observed, it is a question of interpretation. But I feel that whatever may be the interpretation put on the expression "outside labourers" all factories ought to be treated alike in the facilities they are afforded for the bringing in of their raw materials and sending out of the products of their manufacture. I see no reason why the ginning factories and rice mills should be the spoiled pets of the Factory Act.

Minor recommendations.

I entirely agree with my colleagues in all the minor recommendations they have submitted. And if I add a few remarks on some of them, I do so more to amplify than to criticise.

Latrine accommodation.

I agree with the scale of latrine accommodation proposed by the majority of the Commission. But as the member of the Factory Commission who had most to do with the inspection of latrines, I feel that my duty does not end with a proposal of a scale for the number of latrine seats to be insisted on. In the course of my inspections I came across a large number of mills which although provided with a sufficient number of latrine seats to satisfy the existing provisions of law, were yet keeping their latrines in such an insanitary condition as to be positively injurious to the health of the operatives who had to use them. Many

of these latrines were conserved by the local municipalities. And mill managers when taxed with keeping their latrines in such an insanitary condition blamed the municipality for not attending to their conservancy arrangements properly. In one instance the mill manager was even good enough to show me a large file of his correspondence with the local municipality on this vexed question. The correspondence was highly interesting and fairly vigorous, but had no effect in mitigating the insanitary condition of the latrines. The Factory Inspector was practically helpless in the matter, as it would be obviously unfair to proceed against the occupier of the factory when the question of the responsibility for the insanitary condition of the latrines was still a subject of controversy between the millowners and the municipality. The subject is, however, one which cannot be left to be fought out between these contending parties. In my opinion some definite rules ought to be made and strictly enforced by the Local Governments. I see no reason why mills situated within municipal areas with a drainage system on the water carriage principle, should not be compelled to connect their latrines with the town drainage system with efficient arrangements for flushing. And in this connection, although I have no intention of dissenting from the proposal of my colleagues, I think it would be advisable to arm Local Governments with authority under the Act, which they do not at present possess, to insist on separate urinal accommodation wherever it is considered necessary. To insist on separate urinal acommodation in an isolated ginning factory situated in the middle of up-country fields will no doubt be a vexatious proceeding. But to compel the operatives in a large mill, say for instance in Bombay, to go inside not altogether clean latrines when urinal would have answered their purpose equally well, if not better, and expose them to all the injurious influences of excretal emanations, seems to be taking risks rather unnecessarily. At least, my sanitary conscience revolts against it. I only mention these facts in order that Local Governments may be empowered under the Act with authority to deal with possible contingencies.

Water-supply.

The supply of drinking water to the mills is another subject to which I have paid careful attention during my inspections. A large and readily available supply of good drinking water is the most essential thing in an Indian mill. The climate and conditions inside the mill are such that operatives constantly have to come out to drink water. And I have been struck with the enormous quantity of water which the average Indian operative consumes in a day. The majority of the mills I have visited have a good and adequate supply of drinking water stored somewhere within the mill compound. But I have come across a good many mills where there was no drinking water stored, but they merely had the municipal water pipes laid with delivery taps. Municipal water supplies and even "constant" supplies are apt to fail sometimes. And if the water-supply to a large mill fails in the middle of a hot summer's day, and if there is no water stored within the mill compound, the sufferings of the mill-hands will be cruel. The draft Act submitted by the majority of the Commission does say

"that in every factory there shall be maintained a sufficient water-supply for the use of the persons employed in the factory." That is sufficient for the Act. But I have heard it interpreted that the mere introduction of municipal water-supply into the mills satisfies the condition of maintaining a sufficient water-supply. And, as I have already observed, many mills acting on this principle have not provided for any storage of drinking water.

I would suggest that rules should be framed under the Act making it obligatory on millowners to store at least 2 gallons of drinking water for every operative employed in the mill.

Administration of the Factory Act.

With all the proposals made by my colleagues for the efficient administration of the Factory Act I concur. Whether a Chief Inspector of Factories appointed by the Government of India, but who in respect of factory inspection in each Province is directly subordinate to the Local Governments, will be able to prevent the administration of the Factory Act from gradually becoming centralised under the Government of India, is an administrative question which I am not competent to discuss. But, holding as I do, that factory administration ought not to become centralised, I would place on record my emphatic opinion that if there is the remotest chance of the appointment of the newly proposed Chief Inspector leading to any centralisation of the administration of the Factory Act in the Imperial Government then the appointment ought to be done away with. In my opinion the advantages of having a Chief Inspector who would help to introduce uniformity in the administration of the Factory Act all over India will be more than counterbalanced by the disadvantages of centralism which the Chief Inspector may unconsciously bring about.

I agree with all the other recommendations of the majority of the Commission.

I am entirely at one with them in opposing any legal recognition to the working of daylight hours as equivalent to working a 12-hour day. Such a concession may be justifiable in the case of mills situated at the equator. But in some parts of India as in the Punjab where in summer there are 14½ hours of actual daylight, with very high shade temperatures, the operatives could be actually worked for 13½ hours. I am strongly opposed to the system of "daylight" working. I prefer fixed hours.

I also join my colleagues in insisting on the certification of all children before employment. If any departure is made from this rule the way will be thrown open for unscrupulous jobbers to manipulate under-aged children.

If the facilities for certification proposed by the Commission are found to be inadequate in practice, I am sure that Local Governments will readily make arrangements for providing additional surgeons.

My friend the Hon. Mr. Vithaldas Thackersey has always been asking for more. When the Commission proposes a 12-hour day, a very liberal allowance, he wants 12½. I strongly object to any increase over 12

hours, and I feel sure that on this point the majority of my colleagues will be with me.

Conclusion.

I have ventured to submit a separate report dissenting from the views of my fellow members on the Factory Labour Commission because on all the important points referred to the Commission, except that relating to the employment of children, I found that my views were in entire conflict with those of my colleagues. I am perfectly conscious of the fact that I do not possess the practical knowledge of my manufacturing colleagues or the administrative experience of my official fellow members. But all the same I thought it my duty to place before Government my views on questions which I had the opportunity of closely studying during the time that I served as a member of the Factory Labour Commission.

As a medical man, a non-official, with no connection with manufactures of any kind, and above all as a native of India, my points of view will naturally be somewhat different from those of my colleagues. I have looked at the question more from the point of view of an ordinary humble citizen, of "the man in the street," who being neither a capitalist nor a labourer looks upon millowners and mill operatives alike as his countrymen. And if at times I appear to favour the mill labourer more than his capitalist master it might probably be due to the influence of the profession to which I have the honour to belong. I have attempted to investigate and study the questions referred for the consideration of the Factory Commission to the best of my ability. And the conclusions arrived at and embodied in this report are the result of serious study and sincere conviction.

I beg to submit this report for the consideration of the Government.

T. M. NAIR, M.D.

G. M. Press, Simla.—No. 2 C. & I.—9-6-08.—50—P.B.S.

APPENDIX A.

Points referred to the Factory Labour Commission on which the evidence of witnesses is desired.

(A) ADULTS.

(*a*) Should the working hours of adult males be limited, and has the physique of workers been affected by long hours?

(*b*) If hours are to be limited, what number of hours should be fixed, and what would be the best method of enforcing the restriction? Would it be advisable to prescribe—

(1) that, except when working by shifts, the legal working hours should be from 5-30 A.M. to 6 P.M. or from 6 A.M. to 6-30 P.M.;

(2) that the engine should be stopped for half an hour between noon and 2 P.M.; and

(3) that in factories working on the day shift system the legal working hours should be from 5 A.M.to 8 P.M., provided that no adult male should work for more than 12 out of every 24 hours?

In the alternative what hours, and what midday interval, would be suitable?

(*c*) As the result of the illegal employment as adults of persons between the ages of 12 and 14, has there been physical deterioration requiring the creation by law of a special class of workers intermediate between the half-timer and the adult, and corresponding to "young persons" under the English Act, whose working hours should be restricted?

(*d*) If it is considered inadvisable to create a class of "young persons," do you think it desirable that a special register of all workers under the age of sixteen should be maintained in order to facilitate inquiries as to the physical fitness of the youngest adults to work full-time?

(*e*) Should the employment of women at night be prohibited?

(B) CHILDREN.

(*f*) Should the minimum age at which children are allowed to work in factories be raised beyond 9?

(*g*) Should certificates of both age and physical fitness be required before children are allowed to work in factories?

(*h*) Similarly, before children who have hitherto worked half-time are allowed to work full-time as adults, should certificates of both age and physical fitness to work full-time be required?

(*i*) Should it be prescribed by law that children shall not be employed except in regular sets, whether morning and afternoon sets or double sets?

(*j*) Should factory owners be obliged to provide elementary education at their own expense for children working in their factories?

(*k*) Should a rule be made prohibiting non-working young children from accompanying workers to dangerous or unhealthy parts of factories? If so, how should such a prohibition be enforced?

(C) VENTILATION, SANITATION, ETC.

(*l*) Should an attempt be made by testing samples of air taken from factories in India, to prescribe an analytical standard of purity for air in factories, with a view to secure proper ventilation?

(*m*) Should a similar attempt be made to prescribe a standard of moisture for the air in factories, with reference both to manufacturing processes and to the health of the workers?

(*n*) Should a standard of purity be fixed for the water used for humidifying purposes?

(*o*) Should the standard of latrine accommodation be raised to one seat for every 25 workers, and should the provision of separate urinal accommodation be insisted on?

(*p*) Should it be prescribed that all doors of working rooms shall be hung so as to open readily from the inside outwards, in case of fire ?

(*q*) Are further precautions for fencing machinery necessary in any factories or class of factories ?

(*r*) Should arrangements be made to secure uniformity in the administration of the Factory Act throughout India ?

(*s*) Should full-time medical inspectors of factories be appointed to assist the present inspectors in securing the due observance of the Act ?

Questions for the Representatives of Local Governments.

1. What is the strength, the composition, and the pay of the factory inspection establishment in the Presidency/Province ? In what manner is that establishment linked with the administrative machinery of the Government ? Is factory administration supervised—and if so in what manner—by officers not forming part of the special factory establishment ?

2. How is the factory inspection establishment recruited ? Is there any system of training ? Has the present system worked satisfactorily ; and, if not, in what respects is it considered susceptible of improvement ? Is it desirable that the Factory Inspectors should be recruited in the United Kingdom or that, in the alternative, they should be trained there ?

3. Is the present establishment adequate ? If not, what additions are considered necessary in order to bring it up to a proper strength ?

4. It has been suggested that factory administration throughout India should be centralised, and that the direct and supreme control should be vested in the Department of Commerce and Industry. Is this suggestion approved ?

5. Is the proposal to employ whole-time Medical Inspectors of Factories approved ? If so, should their duties include the certifying of the ages of children in factories, or should that duty continue to be performed by Civil Surgeons as at present ? What arrangements would be advisable for their recruitment and appointment ? What staff would be required for the Presidency/Province, what pay is considered adequate, and should the Medical Inspectors be recruited and retained specially for factory work, or should they form part of a large service, such as the Indian Medical Service, or the subordinate Medical Service ? Should they be permitted to take private practice, and in what manner should they be fitted into the administrative machinery ?

6. The Commission would be glad to learn the opinion of the Local Government, based upon the information at present available, regarding the points referred to the Commission, a statement of which is attached. They would also be glad to receive any suggestions which the Local Government may feel disposed to make for the improvement of the existing law, or for securing its better observance.

Questions for Factory-owners, Agents, Managers, etc.

1. Will you kindly give the names of the factories you represent ; also the numbers of men, women, and children employed in each.

2. Will you also state for how many days in each year, during the last 10 years, each of these factories has worked over 12½ hours a day, and what the average daily number of hours has been, for each year, during that 10-year period ?

3. A statement of the main points referred to the Commissioner is appended. Will you kindly give your opinion on the questions raised, or on such of them as you are specially interested in, and which are not dealt with in the succeeding questions ?

4. Can you provide the Commission with statistics showing the effect of working days of varying length (*a*) on the production, *per* spindle, of fine yarn, (*b*) on waste, and (*c*) on the economical working of a factory ? This information, if available, might suitably be supplied in the form annexed. If not connected with a spinning mill, can you supply similar information in respect of the industry in which you are interested ?

5. If certificates of physical fitness as well as of age be required prior to the employment of children on half time, will it, in your opinion, be necessary to prescribe some reasonable time limit within which the employé should be allowed to work, pending examination for a certificate ? If this is considered necessary, what period would you suggest, the possibility of the abuse of the concession in certain cases being kept in mind ? What arrangements do you consider necessary in order to secure the medical examination of half-timers, and of any other employés upon whose examination the law may insist, with reasonable despatch ?

6. It is suggested, under point (*h*) referred to the Commission, that no half-timer should be permitted to work as an adult unless medically certified as physically fit for full-time work. Assuming that this recommendation is accepted in principle, are you of opinion that it could be applied in practice? What safeguards do you consider necessary and feasible with the object of preventing half-timers who are refused certificates as adults in the factory in which they have worked from obtaining employment as adults at some other factory?

7. Are you in favour of the suggestion under point (*c*) referred to the Commission, *viz.*, the creation of a class of "young persons" as in the United Kingdom? If so, what limits of age do you consider suitable? If the law be eventually amended so as to create such a class and to restrict their hours of employment, what effect do you anticipate this will have on the hours during which the factories are worked? Will the proportion of women, half-timers, and "young persons" be so large that, as a matter of economical working, the hours fixed for these classes of workers will in fact determine the hours during which the machinery runs? The Commission would be glad to have information as to the probable number of "young persons," assuming an age limit for that class of 14—16, employed in your factory.

8. It is suggested under point (*b*) referred to the Commission that definite time limits should be prescribed, within which only the employment of operatives would be legal. Assuming that it is eventually decided to restrict the hours of adult labour, should the restriction take the form proposed—the imposition of definite time limits beyond which no operative could be legally employed—or would it be preferable to fix a maximum number of hours, leaving it to the discretion of each individual employer to settle the time for the commencement and the termination of the day's work?

9. If you are of opinion that the special circumstances of the industry in which you are interested are such as to demand exceptional treatment in respect of any of the recommendations or suggestions included in the terms of reference to the Commission, will you kindly state these circumstances, and suggest the form of exception which you consider suitable?

10. It has been suggested that Inspectors from the United Kingdom should be obtained for factory work in India. Do you approve of this suggestion? And do you consider that, in any event, all Factory Inspectors should in future receive a considerable portion of their training in England?

11. Do you consider it essential that any law which it may eventually be decided to introduce, if more stringent than that at present in force, should contain provisions introducing a certain amount of elasticity in its actual operation? If so, have you any suggestions to make as to the general line on which these provisions should proceed?

12. Have you any suggestions to make as regards the housing of factory hands?

13. Are there any other matters which you wish to bring to the notice of the Commission?

Mill.

Working day of *	Production *per* spindle *per* hour of 10s. (Please state whether mule or ring spindle.)	Production of reeling yarn *per* spindle *per* hour of 20s. (Please state whether mule or ring spindle.)	Percentage of waste.	Period covered by these statistics.
12 hours.				
13 hours.				
14 hours.				

* Other working periods may be given, and it is particularly requested that such information may be supplied whenever available.

Questions for Owners, Agents, and Managers of ginning mills and cotton presses.

1. Will you kindly give the following information about the ginning mills or presses with which you are connected?:—

(*a*) name of mill or press;

(*b*) number of men, women, and children usually employed in each mill or press;

APPENDIX B.

Demi-official letter from Lieutenant-Colonel C. Mactaggart, I.M.S., to W.T. Morison, Esq., I.C.S., President, Factory Labour Commission, dated Lucknow, the 18th March 1908.

As requested by you I submit the following memorandum on the medical part of the work of the Factory Commission in the Bombay Presidency.

My views are founded entirely on what I saw and heard in the Bombay Presidency, and it is quite possible that they might have been very materially modified had I had an opportunity of seeing the factory operatives in other parts of India. I have no tabulated figures before me while writing this report, and I may add that the state of my health is at present such as to prevent my writing much on any subject. I hope you will, therefore, accept a short report and pardon its imperfections.

While the Commission was in the Bombay Presidency I saw in Bombay, Ahmedabad, and Broach many thousands of factory operatives—men, women, and children. During the last 18 years it has been my duty to inspect large bodies of men and form an opinion as to their general health and physical condition, and in such work I certainly have had as much experience as almost any officer in the Indian Medical Service. Although therefore I cannot quote figures, I think the general conclusion which I have come to with regard to the physical condition of the factory operatives in the Bombay Presidency is entitled to considerable weight at the hands of the Commission. I am distinctly of opinion that the physical condition of the factory operatives in Bombay is in every way excellent, and that it compares favourably with that of agricultural labourers and men of the cooly class generally. The vast majority of the men and women working in the factories appeared to me to be in excellent health. They seemed well nourished, had healthy skins, and in very few cases did I notice any signs of malnutrition or of disease either hereditary or acquired. The marked absence of all signs of tubercular disease of glands or joints led me to think that tubercle, in spite of the assertion of one medical witness to the contrary, cannot be common among factory operatives in Bombay. Speaking generally and judging from the condition of the operatives, I have absolutely no reason to think that the hours of labour now in force in the Bombay factories have any bad effect on the health of the operatives.

Dr. Turner, the Health Officer of Bombay, submitted to the Commission figures, which appeared to have been very carefully prepared, comparing the health of the factory operatives and their dependants with that of other inhabitants of Bombay in the same class of life. I have not his figures before me, but my recollection is that they clearly shewed that the mortality among factory operatives was considerably lower than that recorded among the other classes referred to. Statistics require to be carefully examined and local circumstances carefully considered in judging of their value, but Dr. Turner's figures certainly gave me the impression of having been prepared with care, and taken in conjunction with the result of my own observations proved to me that the health of the Bombay factory operative is probably better and certainly not worse than that of other classes of similar social standing in the general population.

Some people may find it difficult to realize that the conditions under which the factory hand works can be as healthy as those under which the agricultural labourer or the cooly lives and labours, and probably in England and in many other countries they may not be so. In India, however, the conditions are different. I have had an opportunity for many years past of noticing the comparative health of large bodies of prisoners working respectively in factories and on extra-mural labour such as agricultural work, gardening, and general cooly labour, and I have no hesitation in saying that I have invariably found that the men employed on factory work are much more healthy and far less liable to disease than those employed on extra-mural labour. It was, therefore, no surprise to me to find that the factory operatives in Bombay were a healthy set of men. The only real advantage which the agricultural labourer and cooly has over the factory labourer, as regards the hygienic conditions under which he works, is abundance of fresh air. On the other hand the man working outside is much more exposed to the vicissitudes of a tropical climate than the factory operative is; he is obliged to work in the intense heat of the tropical sun in the hot weather, and in the cold weather is exposed to intense cold and damp while employed in such labour as irrigating rice and other crops. The work of the cooly and agricultural labourer, apart from exposure to the vicissitudes of climate, is also, in my opinion, much harder physical labour than that of the factory operative, whose labour, while it undoubtedly necessitates constant attention, can in no way be said to be physically hard work. Another factor, which undoubtedly has an enormous influence in conducing to good health among the factory operatives, is the fact that they receive very high wages and are able thus to

obtain far better food than the cooly or agricultural labourer can afford. I do not think that there can be any doubt that the lower classes in this country are habitually under-fed and that their health and physique therefore suffer. I am inclined to think that one of the chief reasons for the good health of the factory operative lies in the fact that he is well paid and well fed. While in Bombay we heard a good deal as to the drinking habits of the factory operatives, but I am inclined to think that the witnesses exaggerated when dealing with this matter, and I certainly noticed no signs of chronic alcoholism among the factory operatives. Native gentlemen, who by caste and religion are prohibited from touching alcohol, are, I think, frequently inclined to exaggerate when describing the drinking habits of even very moderate drinkers. It is quite probable that most of the factory operatives in Bombay do indulge in a "tot" of liquor after their day's work is done, but they are well able to afford this luxury without depriving themselves of the necessaries of life, and I doubt if all the alcohol they drink does them any particular harm.

On the whole I must emphatically say that in my opinion it cannot be said with truth that the hours now worked in the Bombay factories have any injurious effect on the health of the operatives. Whether on social, moral, or political grounds it is advisable to take steps to limit the working hours for adult males in factories is another question, but my own opinion, founded on what I saw and heard while a Member of the Commission in the Bombay Presidency, is that there exist absolutely no real grounds, medical or otherwise, which would justify Government in directly limiting the hours of adult male labour in factories by legislative enactment.

I am in favour of the creation of a special class of "young persons" to include all males between the ages of 14 and 18 years of age, whose hours of labour should be limited to 12½ daily, inclusive of half an hour's interval in the middle of the day. While Government has, in my opinion, no justification for interfering directly with the working hours of adult males, I think it is right and proper that it should step in to prevent "*young persons*" from being overworked. While I do not think that, *at present*, in the Bombay Presidency "young persons" are overworked, I think there can be no doubt that they were overworked in 1905, and the same thing will happen again should trade revive and the demand for yarn rise as it did in 1905. "Young persons" between 14 and 18 are just those who are likely to suffer permanently from the effects of overwork even for a limited period. They are also the persons most likely to be driven to working for longer hours than they wish to work, and in any case they are, owing to want of experience, incapable of judging what is good for them as, we must presume, the adult labourer is. If a class of "young persons" is formed, as I suggest, their age must of course be certified and registers containing the names of those employed must be maintained in factories. This will certainly give rise to a good deal of trouble and an increase in clerical work in factory offices, but the due protection of "young persons," in my opinion, justifies the imposition of these inconveniences on millowners and managers. It might be enacted that in every case where a millowner admits that he employs young persons and undertakes that he will not work his engine for a longer period on any day than 12½ hours, including half an hour's interval, that he should be excused from maintaining any register of young persons, but any breach of this undertaking on the part of the millowner or manager, should be punished by a very severe penalty. I do not think it is necessary to have a certificate of physical fitness in the case of young persons, but the arrangement for certifying their age should be much the same as will afterwards be described when dealing with the case of "children." It has been stated, and probably with truth, that the effect of creating a class of "young persons" with limited hours of labour will be to indirectly limit the working hours of adult males as it will be impossible to work the mills profitably without "young persons." If such is the case so much the better. I see nothing dishonest in this policy. Its primary object is to protect those who require protection, *viz.*, the "young persons," and if it indirectly also protects adult males from over working themselves, through greed for extra pay, its effects will be all the more beneficial.

The women working in the factories seemed to me to be a particularly healthy lot and quite capable of working the same hours as I have suggested for "young persons."

The children employed in the factories appeared to me to be on the whole healthy and well cared for and quite capable of doing 7 hours' work daily. I do not advocate reducing hours of "half-timers" unless you decide on a 12-hour day for adults, or introduce a "young persons" class with a 12-hour day for them, in which case it would be well and prevent irregularities if "half-timers" were limited to 6 hours, *i.e.*, half the time of the adults or young persons. There can be no question but that the certifying of children for factory work has been carelessly done in the Bombay Presidency, and I saw large numbers of children obviously under 9 years, although certified as over that age, working in the mills. In my opinion it is absolutely necessary, if Government wishes to enforce the regulations as to the employment of children, that in places like Bombay and Calcutta, where there are a large number of factories, a full-time certifying medical officer should be employed. He should be paid by Government and should be strictly prohibited from accepting any fees from the mills.

In the smaller stations the certifying of children might be done by the Civil Surgeon, but in such cases also he should be paid by Government for any work he does and not by the mill-owners. The medical officer, besides certifying as to the child's age, should certify that the child is physically fit for factory work. I am strongly of opinion that no child should be permitted to work for a single day before it has been certified. If "days of grace" are allowed during which a child can be employed before being certified, the result will certainly be that children will be irregularly employed and that the provisions of the Act will be systematically evaded. Besides a thumb impression, every child's certificate should give two distinctive clear marks by which the child can be easily identified, and these distinctive marks should be entered by the medical officer with his own hand. Every child should carry his certificate on his person. The practice in the Ahmedabad mills shows that this can be easily done and the advantage to an inspecting officer of being able immediately to refer to any child's certificate is obvious. It should be laid down in any future Factory Act that children should work in two sets of six or seven hours as the case may be and that a register showing the names of the children working in each set should be written up daily and be ready for inspection by 8 A.M. The penalty for not keeping up this register should be severe and the responsibility for its upkeep should rest on the mill manager himself. Children should only be allowed inside the mill compound during the hours in which their set is actually supposed to be employed, and for example, any child of "B" set found within the mill compound during the working hours of "A" set, should be considered as being irregularly employed and the onus of proof that he is not so irregularly employed, should rest on the mill manager. Schools in mill compounds should be prohibited. If mill children are to be sent to school, Government or Municipal schools for them should be provided and the attendance registers should be open to inspection by the Factory Inspectors. I consider that for a child, who works six hours a day in a factory, the school hours should not exceed two.

I am of opinion that the Government should lay down a standard of ventilation for factories. This should be done by indicating an amount of carbonic acid which must not be exceeded in the atmosphere of any factory. The limit of carbonic acid permissible should be determined after careful experiments carried out by competent officers.

It is, in my opinion, impossible to lay down any standard of humidity for the air of Indian factories. During the monsoon, the amount of moisture in the external atmosphere approaches "saturation" and it would thus be obviously impossible to enforce any standard which limited the humidity permissible in workshops.

In my opinion the standard of latrine accommodation laid down in the Factory Act is quite sufficient. I visited many mills in the early morning when the latrine accommodation might be supposed to be most severely taxed, and in no case did I notice that the accommodation was insufficient or that the workmen were waiting for admission to the latrines.

Separate urinal accommodation should be insisted on. The latrines I saw were in many instances very foul, but this is one of the many defects in the control of factories which can only be got over by more efficient inspection

I think I have now touched on most of the important points from a medical point of view which were disclosed during the stay of the Commission in the Bombay Presidency.

APPENDIX C.

Statement showing the average weights of prisoners and of mill operatives.

Province.	Number of prisoners weighed.	Average weight in lbs.	Number of operatives, other than weavers, weighed.	Average weight in lbs.	Number of weavers weighed.	Average weight in lbs.	REMARKS.
Bombay	2,656	112·12	735	102·093	288	104·810	
Central Provinces	1,746	110·45	100	100·92	52	107	
Bengal	6,834	106·187	140	107·939	32	106·25	Average weight of prisoners in the United Provinces, 115·08lbs.
Eastern Bengal and Assam ..	3,046	110·846	20	108	..	..	
Burma	6,340	120·51	42	117·142	..	..	Average weight of prisoners in the Rajamundry Central Jail, Madras, 125·7 lbs.; in Madras generally 114·38 lbs.
Madras	7,818	114·38	104	103·634	20	98	
United Provinces of Agra and Oudh	9,680	115·08	177	107·016	200	110·705	
Punjab	5,998	120·42	115	113·808	..	..	

NOTE.—In Bengal probably the most accurate comparison is with prisoners in the United Provinces; in Burma with prisoners in Madras generally, and more particularly with prisoners in the Rajamundry Central Jail, which is situated in the tract from which the majority of the Madrasi labourers in Burma are recruited.

APPENDIX D.

Comparative statement of production in certain Calcutta jute mills for working days of varying length.

Month.	Year 1906 (daylight hours) only.				Year 1907 (with electric light).				Percentage by which the production *per* hour in the shorter day (column 5) exceeds that in the longer day (column 9).
	No. of working days.	No. of hours worked *per* day.	Total production.	Production *per* hour.	No. of working days.	No. of hours worked *per* day.	Total production.	Production *per* hour.	
			Tons.	*Tons.*			*Tons.*	*Tons.*	
Mill A.									
January	27	11½	1,761	5·67	26	14½	2,044	5·42	4·61
February	23	12	1,602	5·89	24	14½	1,863	5·35	10·09
March	26	12¼	1,844	5·75	26	14½	1,933	5·13	12·08
April	25	13	1,737	5·37	26	14½	1,854	4·92	9·14
May	27	13¼	1,925	5·35	27	14½	1,788	4·56	17·32
June	26	13½	1,963	5·52	25	14½	1,841	5·07	8·87
Mill B.									
January	27	11½	1,596	5·14	26	14½	1,769	4·7	9·36
February	23	12	1,410	5·17	24	14½	1,556	4·47	15·65
March	26	12¼	1,654	5·15	26	14½	1,630	4·32	19·21
April	25	13	1,558	4·79	26	14½	1,480	3·92	22·19
May	27	13¼	1,699	4·72	27	14½	1,462	3·73	26·54
June	26	13½	1,690	4·75	25	14½	1,488	4·10	15·85
Mill C.									
January	27	11½	1,702	5·48	26	14½	2,084	5·53	17·17
February	23	12	1,518	5·58	24	14½	1,841	5·28	5·68
March	26	12½	1,851	5·77	26	14½	1,960	5·20	10·96
April	25	13	1,713	5·27	26	14½	1,901	5·04	4·56
May	27	13¼	1,802	5·00	27	14½	1,864	4·76	5·04
June	26	13½	1,900	5·35	25	14½	1,856	5·12	4·49

NOTE.—In January–March the labour supply was slightly better in 1906 than in 1907; otherwise the conditions were similar. In April–June 1907 the production was below the normal, because of a shorter labour supply, and the making of lighter fabrics than in 1906.

APPENDIX E.

DRAFT BILL.

WHEREAS it is expedient to amend the law regulating labour in factories; it is hereby enacted as follows:—

Preamble.

PRELIMINARY.

Short title, commencement, repeals and extent.

1. (1) This Act may be called the Indian Factories Act, 190 .

(2) It shall come into force on ; and from that date Act No. XV of 1881 and Act XI of 1891 shall be repealed.

(3) It applies to the whole of British India.

Interpretation-clause.

2. In this Act, unless there is something repugnant in the subject or context,—

"Factory."

(1) "factory" means any premises (other than indigo-factories or premises situated on, and used solely for the purposes of, a tea or coffee plantation) wherein is carried on any process for, or incidental to, making, altering, repairing, ornamenting, finishing or otherwise adapting for use, transport, or sale any article or part of an article; and—

(*a*) wherein steam, water, or other mechanical power is used in aid of any such process; and

(*b*) wherein, subject to the provisions of section 38, not less than fifty persons are on any day simultaneously employed in any manual labour in, or incidental to, any such process; and

every part of a factory shall be deemed to be a factory, except any part used exclusively as a dwelling:

"Child."

(2) "child" means a person who is under the age of fourteen years, and who has not, being of the age of thirteen years, both passed such educational test as the Local Government may from time to time notify under this sub-section and been declared by the certifying surgeon to be fit to work daily for the time allowed by law for a young person:

"Young person."

(3) "young person" means a person who has ceased to be a child and is under the age of seventeen years:

"Woman."

(4) "woman" means a woman of the age of seventeen years and upwards:

"Mill-gearing."

(5) "mill-gearing" includes every shaft, whether upright, oblique, or horizontal, and every wheel, drum, pulley, rope, driving strap or band, by which the motion of the first moving power is communicated to any machine:

"Employed."

(6) a person who works in a factory, whether for wages or not, in a manufacturing process or handicraft, or in cleaning any part of the factory used for any manufacturing process or handicraft, or in cleaning or oiling any part of the machinery, or in any other kind of work whatsoever incidental to, or connected with, the manufacturing process or handicraft, or connected with the article made or otherwise the subject of the manufacturing process or handicraft therein, shall be deemed to be employed therein within the meaning of this Act:

"Actually employed."

(7) a person shall not be deemed to be actually employed, within the meaning of sections 9, 10, and 11, during any stoppage of work allowed under section 7 or any other interval of not less than half an hour's duration duly notified under section 14:

"Continuous running."

(8) a factory shall be deemed to run continuously unless the running is interrupted by an interval of at least half an hour.

INSPECTORS AND CERTIFYING SURGEONS.

Inspectors.

3. (1) The Governor-General in Council may, by notification in the *Gazette of India*, appoint a chief inspector of factories in India and may regulate the manner in which he is to perform his duties under this Act.

(2) The Local Government may in its discretion, by notification in the official Gazette, appoint, by name or by office, such persons as it thinks fit to be inspectors of factories within such local limits as it may assign to such inspectors.

The District Magistrate shall, in virtue of his office, be an inspector of all factories, if any, in his district.

(3) Such chief inspector and inspectors shall be deemed public servants, within the meaning of the Indian Penal Code, and shall be officially subordinate to such authority as the Governments appointing them may from time to time indicate in this behalf.

Powers of Inspector.

4. The chief inspector of factories, and an inspector of factories within the local limits for which he is appointed, may—

(*a*) enter, with such assistants (if any) as he thinks fit, any factory whenever he has reason to believe that any person is employed therein;

(*b*) make such examination of the premises and machinery, and of the registers hereinafter prescribed, and take on the spot or otherwise such evidence of any persons as such inspector may deem necessary for carrying out the purposes of this Act;

(c) exercise such other powers as may be necessary for carrying this Act into effect.

5. The Local Government may appoint, by name or by office, such persons practising medicine or surgery as it thinks fit to be certifying surgeons for the purposes of this Act within such local limits as it may assign to each, and may make rules for the performance of their duties.

Certifying surgeons.

6. (1) A certifying surgeon shall, at the request of any person under the age of seventeen years desirous of being employed in a factory situated within the local limits to which he is appointed, or of the parent or guardian of such person, or of the occupier of the factory in which such person desires to be employed, and on payment of such fee, if any, as may from time to time be prescribed by the Governor-General in Council, examine such person and grant him a certificate specifying his age as nearly as it can be ascertained and, if such person is under fourteen years of age, stating whether he is fit for employment in a factory. Such certificate shall be made over to the person examined, and shall be his property.

Grant of certificates.

th(2) The certificate shall be in such form as toe Governor-General in Council may from time time prescribe.

(3) A certifying surgeon may empower any qualified medical practitioner to grant, on personal examination, provisional certificates to persons desirous of being employed in any specified factory or factories, and may revoke such authority. A provisional certificate shall be subject to confirmation, on personal examination of the person named therein, by the certifying surgeon, and shall be valid only until the date of the first visit of the certifying surgeon to the factory concerned, after the date on which it was issued.

EMPLOYMENT OF OPERATIVES.

7. (1) In every factory, except a factory in which a system of employment in shifts approved by the local inspector is in force, there shall be, after the factory has run continuously for not more than six hours, an entire stoppage of all work for not less than half an hour :

Limited stoppage of work daily in certain circumstances.

Provided that nothing in this section shall apply to—

(a) flour mills, rice mills, or ice factories, or

(b) continuous processes in a tannery, sugar refinery, brewery, distillery, mineral-oil refinery, cement works, chemical works, and kilns connected with potteries, or

(c) work in any factory in the boiler-house or engine-room, or as a mechanic, or on the processes of hand-packing and hand-baling, or

(d) any factory of a class to which the Governor-General in Council has, by notification in the *Gazette of India*, declared this section not to apply.

(2) No system of shifts in which the hours of the beginning and ending of the actual employment of each operative in each shift have not been fixed by the occupier of the factory shall be recognised for the purposes of this section.

8. (1) No person shall be employed in any factory on a Sunday :

Holidays.

(2) Provided as follows :—

(a) any manager, foreman, mechanic, artisan, or labourer may be employed in a factory on a Sunday in examining or repairing, or in supervising or aiding in the examination or repair of, any machinery or other thing whatsoever necessary for the carrying on of the work performed in the factory ;

Explanation.—Periodical cleaning is not included in the terms "examining or repairing" ;

(b) any person may be employed on a Sunday in an ice-factory, and on continuous processes in a tannery, sugar-refinery, brewery, distillery, mineral-oil refinery, cement works, chemical works, glass work, and in kilns connected with potteries ;

(c) any person may be employed in a factory on a Sunday if he has had or will have a holiday for a whole day on one of the three days immediately preceding or succeeding the Sunday, and if the occupier of the factory has, previous to the Sunday or to the substituted day, whichever is earlier, served on the local inspector notice of his intention so to employ the said person ;

(d) the Local Government may from time to time, by notification in the official Gazette, declare sub-section (1) of this section not to apply to any factory or class of factories (the factory or class being described in the notification) in which the work performed—

(i) necessitates continuous production for technical reasons ; or

(ii) supplies the public with articles of prime necessity which must be made every day ; or

(iii) by the exigencies of the trade or by its nature cannot be carried on except at stated seasons or at times dependent on the irregular action of natural forces ; and

(e) the Governor General in Council may from time to time, by notification in the *Gazette of India*, declare sub-section (1) of this section not to apply to factories of any class described in the notification.

9. (1) No child shall be employed in any factory unless he has obtained a certificate under section 6 of this Act to the effect that he is of a specified age not less than nine years, and is fit for employment in a factory.

Employment of children.

(2) No child shall be employed in any factory before half-past five o'clock in the morning or after seven o'clock in the evening.

(3) No child shall be actually employed in any factory for more than six hours in any one day.

(4) The period of employment of a child shall not in any one day be spread over more than eight and a half consecutive hours.

Employment of young persons.

10. (1) No young person shall be employed in any factory unless he has obtained a certificate under section 6 of this Act showing that he is not less than fourteen years of age;

Provided that if a young person can, by the production of a certificate obtained by him as a child under section 6 of this Act, show that he has since attained the age of fourteen years, no further certificate shall be required under this section.

(2) No young person shall be employed in any factory, except a factory for ginning cotton, before half-past five o'clock in the morning and after seven o'clock in the evening:

Provided that, if the exigencies of trade so demand, the Governor General in Council may from time to time, by notification in the *Gazette of India*, declare this sub-section not to apply to young persons employed in factories of any class described in the notification.

(3) No young person shall be actually employed in any factory for more than twelve hours in any one day.

Employment of women.

11. (1) No woman shall be employed in any factory, except a factory for ginning cotton, before half-past five o'clock in the morning or after seven o'clock in the evening.

(2) No woman shall be actually employed in any factory for more than twelve hours in any one day.

Prohibition of employment of woman, young person, or child in two factories on same day

12. No occupier of a factory shall employ therein on any day any woman, young person, or child who has to his knowledge already been employed on the same day in any other factory.

Registers of young persons and children.

13. In every factory there shall be kept, in such form and manner and with such particulars as the Governor General in Council may from time to time prescribe, a register of the young persons and children (if any) employed in such factory, and of their respective employment.

Notice fixing hours of employment, etc.

14. (1) There shall be affixed in some conspicuous place near the main entrance of every factory a notice, in English and the language of the majority of the operatives in such factory, setting forth the following particulars—

(*a*) the hours of stoppage of work under section 7.

(*b*) the hours of beginning and ending work for each shift (if any) approved under section 6,

(*c*) the hours of employment of women and young persons (if any),

(*d*) the hours of employment of children (if any) according to the different sets, and

(*e*) the compulsory holidays on which the factory will be closed during the current month.

A copy of the notice shall be sent so as to reach the local inspector not later than the first day of the month to which it relates.

Special provision as to employment of young persons in factories working not more than 12 hours a day.

15. (1) The provisions of sub-section (1) of section 10 and section 13 as to the certification and registration of young persons shall not apply to any young person employed in a factory which is conducted on the system of working not more than twelve hours a day, exclusive of any stoppage under section 7, and the occupier of which has previously served on the inspector notice of his intention to conduct the factory on such system from a specified date.

(2) When the occupier of a factory has served on the inspector notice of his intention as aforesaid, the factory shall be deemed to be worked on that system from the date specified in the notice until the occupier changes it, and, subject to the exception made in sub-section (4), any person actually employed during such period in that factory for more than twelve hours on any one day shall be deemed to be employed contrary to the provisions of the Act.

(3) When the above system has been introduced in a factory, no change shall be made within three months of its introduction, and until the occupier has served on the inspector notice of his intention to change the system from a specified date.

(4) In a factory conducted on the above system, the restriction of the period of actual employment to twelve hours a day shall not apply to any person not less than seventeen years of age who is employed in the said factory in the boiler house or engine room, or as a mechanic, or on the processes of calendering, sewing, bundling, packing, or baling.

Saving for young persons employed in repairs.

16. Nothing in section 10 shall apply to any young person being a mechanic, artizan, or labourer, working only in repairing either the machinery in or any part of a factory.

HEALTH AND SAFETY.

Sanitary provisions.

17. The following provisions shall apply to every factory:—

(*a*) it shall be kept in a cleanly state;

(*b*) it shall be kept free from effluvia arising from any drain, privy, or other nuisance;

(*c*) it shall not be so overcrowded while work is carried on therein as to be dangerous or injurious to the health of the persons employed therein;

(*d*) it shall be ventilated in such a manner as to render harmless, as far as practicable, any gases, vapours, dust, or other impurities generated in the course of the work carried on therein that may be injurious to health.

Provision as to ventilation by fans in certain factories.

18. (1) If in a factory in which any process is carried on by which dust or other impurity is generated and inhaled by the workers to an injurious extent it appears to the local inspector that such inhalation could be to a great extent prevented by the use of a fan or other mechanical means, the local inspector may direct that a fan, or other mechanical means of a proper construction for preventing such inhalation be provided, maintained, and used within a reasonable time.

(2) Any order under sub-section (1) may be set aside, on appeal or otherwise, by the Local Government or such authority as it may appoint in this behalf.

Ventilation in cotton factories.

19. In every factory in which the spinning or weaving of cotton is carried on the arrangements for ventilation shall be such that during working hours in no part of the factory shall the proportion of carbonic acid (carbon dioxide) exceed such amount as may be prescribed by the Governor General in Council by notification under this section.

Purity of water used for humidifying.

20. In any factory in which humidity of the atmosphere is produced by artificial means the water used for the purpose of producing humidity shall be taken either from a public supply of drinking water or from other source of water ordinarily used for drinking, or shall be effectively purified to the satisfaction of the inspector before being used for the purpose of producing humidity.

Provision of latrines.

21. Every factory shall be provided with suitable latrine accommodation for its operatives according to such scale as may be prescribed by the Local Government by notification under this section.

Water supply.

22. In every factory there shall be maintained a sufficient water-supply for the use of the persons employed in the factory.

Doors of factory to open outwards.

23. In every factory, the construction of which was not commenced before the date on which this Act came into force, the doors of each room in which more than thirty persons are employed, shall, except in the case of sliding doors, be constructed so as to open outwards.

Provision of means of escape in case of fire.

24. (1) Every factory shall be provided with such means of escape in case of fire for the persons employed therein as can reasonably be required in the circumstances of each case.

(2) In the case of any factory which is not so provided the local inspector may serve on the occupier of the factory a notice in writing specifying the measures necessary for providing such means of escape, and requiring him to carry them out before a specified date.

(3) Any order under sub-section (2) may be set aside, on appeal or otherwise, by the Local Government or such authority as it may appoint in this behalf.

Fencing.

25. (1) (*a*) Every fly-wheel directly connected with a steam-engine, water-wheel or other mechanical power in any part of a factory, every part of a steam-engine or water-wheel, and every other part of the machinery or mill-gearing of a factory which may, in the opinion of the local inspector, be dangerous if left unfenced, shall, while the same is in motion, and

(*b*) every hoist or teagle, and every hoist-well, trap-door or other s milar opening near which any person is liable to pass or be employed, shall at all times, be kept by the occupier of such factory securely fenced to the satisfaction of and in accordance with any orders given by the local inspector.

(2) Any order under sub-section (1) may be set aside, on appeal or otherwise, by the Local Government or such authority as it may appoint in this behalf.

Prohibition of employment of women, &c., in certain dangerous work.

26. No woman, female young person, or child shall be allowed to clean any part of the mill-gearing or machinery of a factory while the same is in motion, or to work between the fixed and traversing parts of any self-acting machine while such machine is in motion by the action of the steam engine, water-wheel, or other mechanical power, as the case may be.

Prohibition of employment of women, &c., in front of cotton-openers in press factories.

27. No woman, female young person, or child shall be employed in the part of a factory for pressing cotton in which a cotton-opener is used, provided that if the feed-end of the cotton-opener is in a room entirely separated from the delivery-end by a partition extending from the floor to the roof, then women, female young persons, and children may be employed in the room in which the feed-end of the opener is situated.

Notice to be given of accident.

28. When any accident occurs in a factory causing death, or bodily injury, whereby the person injured is prevented from returning to his work in the factory during the forty-eight hours next after the occurrence of the accident, notice of such accident should be sent to such authorities in such form and within such time as the Local Government may from time to time by rule direct.

PENALTIES.

Penalties.

29. (1) If in any factory—

(*a*) any person is employed or allowed to work contrary to any of the provisions of this Act;

(*b*) a register is not kept in the manner prescribed under section 13;

(*c*) a notice is not set up and maintained, and a copy thereof sent to the local inspector, as required by section 14;

(*d*) any of the provisions of sections 17 and 19 for cleanliness, ventilation; and overcrowding are not complied with;

(*e*) any order of an inspector under sections 18 and 24 is not complied with;

(*f*) water is used for the purpose of producing humidity in contravention of the provisions of section 20;

(*g*) a sufficient supply of water for the persons employed is not maintained;

(*h*) latrine accommodation is not provided in accordance with the provisions of section 21;

(*i*) any machinery, mill-gearing, hoist, teagle, or opening is not kept fenced as required by section 25;

(*j*) any door is constructed and maintained in contravention of section 23;

(*k*) any notice or return required by this Act, or by rules under it, to be furnished is not furnished;

(*l*) any other act prohibited or prescribed by this Act or any order or rule made thereunder is done or is omitted to be done;

the occupier of the factory shall be liable to fine which may extend to two hundred rupees:

Provided that—

(*i*) no prosecution under this sub-section shall be instituted except by, or with the previous sanction of, the local inspector; and

(*ii*) no person shall be liable under this sub-section to more than one penalty for any one description of offence committed on the same day, except where two or more persons are employed contrary to the provisions of this Act, in which case one penalty may be imposed in respect of each person so employed.

(2) Any person who corruptly uses or attempts to use, as a certificate granted to himself under section 6, a certificate granted to another person under that section, or who, having procured a certificate under the said section, corruptly allows it to be used, or an attempt to use it to be made, by another person, shall be punished with fine which may extend to twenty rupees.

Obstruction to inspectors.

30. If any person wilfully delays an inspector in the exercise of any power under section 4, or fails to produce, on demand by an inspector, any registers or other documents kept in pursuance of this Act, or conceals or prevents, or attempts to prevent, any person employed in a factory from appearing before or being examined by an inspector, he shall be liable to fine not exceeding two hundred rupees:

Provided that no one shall be required to answer any question or to give any evidence to criminate himself.

2 C. & I.

Exemption of occupier from fine on conviction of the actual offender.

31. (1) When the occupier of a factory is charged with an offence against this Act, he shall be entitled, upon information duly laid by him, to have any other person whom he charges as the actual offender brought before the Court at the time appointed for hearing the charge; and if, after the commission of the offence has been proved, the occupier of the factory proves to the satisfaction of the Court—

(*a*) that he has used due diligence to enforce the execution of this Act, and

(*b*) that the said other person had committed the offence in question without his knowledge, consent, or connivance,

that other person shall be convicted of the offence, and the occupier shall be discharged from any liability under this Act.

(2) When it is made to appear to the satisfaction of an inspector at the time of discovering an offence—

(*a*) that the occupier of the factory has used all due diligence to enforce the execution of this Act, and

(*b*) by what person the offence has been committed, and

(*c*) that it has been committed without the knowledge, consent, or connivance of the occupier and in contravention of his orders,

the inspector shall proceed against the person whom he believes to be the actual offender without first proceeding against the occupier of the factory.

Presumption as to employment.

32. If a person over the age of six years is found inside any room or other part of a factory in which any manufacturing process or work incidental to any manufacturing process is being carried on, he shall, until the contrary is proved, be deemed to have been then actually employed in that factory.

Evidence as to age.

33. When an act or omission would, if a person were under or over a certain age, be an offence punishable under this Act the statement on oath of a certifying surgeon that he has personally examined the said person and believes him to be under or over a stated age shall, in the absence of a birth-certificate or of a certificate granted under section 6, be conclusive evidence of the age of that person.

Person beginning to occupy factory to give notice.

34. (1) Every person shall, within one month after he begins to occupy a factory, send to the local inspector a written notice containing the name of the factory and of the place where it is situate, the address to which he desires his letters to be addressed, the nature of the work performed in such factory, the nature and amount of the moving power therein, and the name of the person under whom the business of the factory is to be carried on.

(2) If the person under whom the business of the factory is carried on be changed, the occupier for the time being shall send to the local inspector, within seven days from the date on which the change was made, a written notice stating the name of the person under whom the business of the factory will in future be carried on

(3) During the absence of the occupier of the factory from British India, the person under whom the business of the factory is carried on shall be deemed to be the occupier of the factory for all the purposes of the Act.

MISCELLANEOUS.

35. *Computation of time.* The hours of day prescribed in sub-section (2) of sections 9 and 10 and sub-section (1) of section 11 shall be deemed to be hours of local mean time:

Provided that for the purpose of factories situated at places where local mean time is not the Government standard of time, the Local Government shall declare by notification that certain specified hours of Indian standard time shall be substituted, in each such place or district, for the hours of local mean time prescribed in these sections, and thereafter these sections shall, for the purpose of all factories situated at such places, be read as if the substituted hours of Indian standard time were prescribed therein.

36. *Power to make rules.* (1) Subject to the control of the Governor General in Council, the Local Government may from time to time make rules consistent with this Act to provide for

(*a*) the fencing of machinery, mill-gearing, hoists and teagles, and hoist-wells, trap-doors and other similar openings, in factories;

(*b*) the water-supply to be maintained for the use of persons employed in factories;

(*c*) the ventilation of factories and their cleanliness (including lime-washing, painting, varnishing, and washing) and freedom from effluvia arising from any drain, privy, or other nuisance;

(*d*) the prevention of such overcrowding of factories, while work is carried on therein, as is likely to be injurious to the health of the persons employed therein;

(*e*) the inspection of factories;

(*f*) the manner in which appeals under this Act are to be presented and heard; and

(*g*) otherwise carrying out the purposes of this Act.

(2) The Governor General in Council may from time to time make rules requiring occupiers of factories to furnish such returns, occasional or periodical, as may be necessary for the effectual carrying out of this Act.

(3) Such rules shall be published in the local official Gazette or the *Gazette of India*, as the case may be, and shall thereupon have the force of law.

(4) Before making rules under clause (*b*), clause (*c*), or clause (*d*) of sub-section (1) of this section, the Local Government, and before making rules under sub-section (2) of this section, the Governor General in Council, shall publish, in such manner as may in its or his opinion be sufficient for giving information to persons interested, a draft of the proposed rules, with a notice specifying a date (not less remote than two months from the publication of the notice) on or after which the draft will be taken into consideration, and shall consider any objection or suggestion which may be received from any person with respect to the draft before the date so specified.

37. *Crown factories.* This Act shall apply to factories belonging to the Crown:

Provided that, in case of any public emergency, the Governor General in Council or the Local Government may, by an order in writing, exempt any factory from this Act to such extent and during such period as the Governor General in Council or the Local Government, as the case may be, thinks fit.

38. *Power to Local Government to extend definition of "factory."* Notwithstanding anything in clause (*b*) of the definition of the word "factory" in section 2 the Local Government may, from time to time, by notification in the official gazette, declare any premises, or premises of any class, which fufil the other conditions of the said definition, to be a factory for all the purposes of this Act, or for such of those purposes as may be specified in the notification, if the number of persons simultaneously employed in the premises on any day in any manual labour in, or incidental to, any such process as is referred to in the said clause (*b*) is less than fifty and not less than twenty.

(2) The Local Government may, by such notification, fix any number below fifty and not below twenty as the number of persons whose simultaneous employment as aforesaid is to be held to subject premises, as a factory, to all or any of the provisions of this Act and of the orders and rules made thereunder.

Notes on sections.

Section 2.—For definition of "factory" see paragraph 79 of report, "child" paragraph 91, "actually employed" section 10 (2) of the present Act. A definition of "continuous running" is necessary for the purpose of section 7 of the draft.

Section 3.—For the appointment of a Chief Inspector see paragraph 113 of report.

Section 4, *clause* (*c*).—This is taken from the English Act and seems necessary to protect an inspector in the execution of his duty. Clause (*c*) of the present section has been omitted because we propose to make the employment of any child or young person without a certificate an offence.

Section 6.—See section XVI of report. We think it important that the form of certificate should be the same throughout India and have therefore made the Governor-General in Council the prescribing authority. The form should, we think, be as follows :—

CERTIFICATE OF AGE UNDER INDIAN FACTORIES ACT.

No. of certificate—————*Date of certificate*—————

Place—————

Name.	Father's name.	Caste.	Residence.	Two personal marks of identification.	Approximate age on date of certificate. (*Years in words.*)	Whether physically fit or not, if under 14 years.

Provisional certifier (*if any*). *Certifying Surgeon.*

We think it important to have the form as simple and brief as possible: it should be in duplicate, one copy being given to the child or young person and the other to the factory in which he is employed. Thumb impressions are, in our opinion, unnecessary, as they can seldom be read by factory inspectors or managers; but the marks of identification should be carefully entered. Certificate forms should be printed by Government on very durable paper, and issued in books to certifying surgeons, or for sale to factory owners. No other forms should be used. It is important that the paper should be strong and durable, as a child's certificate has to last for several years.

Section 7.—For sub-section (1) see paragraph 86 of report. The exemptions we propose are in favour of factories, or parts of factories in which work cannot be stopped during the intervals of rest, *e.g.*, the fires must be kept up in the boiler house and the engines must be oiled during the interval. In factories which dispose of their goods by retail, orders which arrive in the forenoon must be despatched by the afternoon, thus necessitating hand-packing during the interval. For sub-section (2) see paragraph 72 of report.

Section 8.—See paragraph 87 and 88 of report. The words "by the exigencies of the trade" have been added in clause (*d*) (*iii*) of sub-section 2 so as to include ginning factories (see the last sentence of paragraph 81 of the report). There is nothing in the nature of the work of ginning to prevent it being carried on at any time of year, but the trade requires that it shall be carried on as soon as the cotton is picked.

Section 9.—See paragraphs 63, 66, and 71 of report.

Section 10.—See paragraphs 58, 61, 66, 67, and 68 of report.

Section 11.—See paragraphs 64, 66, and 67 of report.

Sections 12 *and* 13.—These are practically sections 11 and 9 of the present Act. The forms of registers under section 13 will have to be very carefully drawn up after consulting all Local Governments, and we think that the same forms should be prescribed for factories all over India.

Section 14.—This is based on section 10 of the present Act: it seems advisable that the notice should be in the language of the majority of the operatives, *e.g.*, most of the operatives in factories in Burma are Madrasis who do not understand Burmese, and in jute mills at Calcutta the hands are mostly from the United Provinces. The obligation to notify information under each of clauses (*a*) to (*e*) will help towards the enforcement of the law, and the notice will be of great use to inspectors.

Section 15.—See paragraph 60 of report: the section is drafted on the lines of section 29 of the English Act.

Section 16.—This is section 158 of the English Act: it is necessary in order to provide facilities for gangs of mechanics, which often include apprentices and young boys, employed on special repairs in factories.

Sections 17, 21, *and* 22.—In the present Act there are no *substantive* provisions dealing with ventilation, over-crowding, etc., and doubt has been expressed whether rules made under section 18, sub-section (1), clauses (*b*), (*c*), and (*d*), would be held by the courts to be "consistent with the Act." To remove any doubt on this point, we have drafted sections 17, 21, and 22, while section 36, sub-section (1) (*b*), (*c*), and (*d*), provides for the making of rules dealing with these matters. Section 17 is based on section 1 of the English Act.

Section 18.—See paragraph 97 of report and section 74 of the English Act.

Section 19.—See paragraph 94 of report and section 94 (3) of the English Act.

Section 20.—See paragraph 96 of report and section 94 (1) of the English Act.

Section 21.—The scale of latrine accommodation which we propose for adoption all over India is given in paragraph 98 of our report. We think it better, however, to let the notification be issued by the Local Governments in case there may be need for a modification of the scale in special localities.

Section 23.—See paragraph 101 of report and section 16 (2) of the English Act.

Section 24.—See paragraph 100 of report and section 14 of the English Act.

Section 25.—The section dealing with fencing is in the amended form approved by the Government of India on 25th May 1905.

Section 26.—This is section 8 of the present Act, but we propose to extend the prohibition to women and female young persons because we consider they are exposed to considerable danger in employment of this kind on account of the clothes they wear; they are protected under the English Act, [sections 12 (3) and 13 (3)].

Section 27.—See paragraphs 102, 103, and 104 of report.

Section 29.—This section has been re-drafted in order to make the occupier of a factory responsible, in the first instance, for all breaches of the Act committed in his factory. This liability is actually imposed by section 17 of the present Act, but there has been difficulty in some cases in the past in bringing home the responsibility, and we think it will be a much better arrangement to declare the occupier liable in every case, giving him at the same time an opportunity of discharging his liability by producing the actual offender. Advantage has in the past actually been taken of the wording of the present section ('any person who employs, etc.') to put forward low-paid subordinates to bear the brunt of prosecutions: one witness stated to us that one of the duties of the mill jobber in Bombay was to stand prosecutions.

Section 30.—As inspection will, we hope, be much stricter in future, we consider it necessary to guard against the wilful obstruction of an inspector in the execution of his duties: the inspectors in Bombay also have informed us that they consider a provision of this nature necessary. The section is based on section 119 (3) of the English Act.

Section 31.—The remarks on section 29 explain the necessity for this provision. The draft merely reproduces section 141 of the English Act.

Section 32.—See paragraphs 92 and 93 of the report.

Section 33.—We have altered section 16 of the present Act considerably. Under our proposals for the certification of children and young persons, the possession or non-possession of a certificate will, in most cases, be the only point to be inquired into. But there will still be some cases in which the question of age will arise; and we think that the statement on oath

of the certifying surgeon should exclude all other oral evidence on this point. Past experience has shown that there is no generally accepted test or standard for age, and in any prosecution the evidence of respectable medical men can always be got to contradict the opinion of the certifying surgeon. We consider that the certifying surgeons are, by experience, probably better qualified to give an opinion on age than other medical men, and also that in order to secure a proper enforcement of the Act, it is necessary that their opinion as to age should be accepted by the courts. It hardly seems necessary in these circumstances to retain in the section the provision as to the burden of proof.

Section 34.—We think that the occupier of a factory should, so long as he remains in British India, always be primarily responsible for breaches of the Act in his factory. The words "during the absence of such occupier from the factory," in the amending Bill approved by the Government of India on 25th May 1905 are too vague. Only in the case of the occupier's absence from British India would we permit the responsibility to devolve on the manager; and we have drafted this section accordingly.

Section 35.—See paragraph 69 of report.

Section 36, 37, *and* 38.—These are sections 18, 19, and 20 of the present Act.

APPENDIX F.—Inspection notes.

APPENDIX F.—Inspection notes.

Notes on Factories visited by the Commission.

AHMEDABAD.

Serial no. of factory.	Notes.
1	*Cotton spinning.*—Employs 1,102 workers, including 101 women and 165 half-timers. The latter work in three relays— (*a*) From 6-30 A.M. to 2 P.M. with rest intervals from 9-30 A.M. to 10 A.M. and 12-30 to 1 P.M. (*b*) 10 A.M. to 6-15 P.M. with rest intervals from 12-30 P.M. to 1 P.M. and 4 P.M. to 4-30 P.M. (*c*) 8 A.M. to 5-30 P.M. with rest intervals from 11 A.M. to 1 P.M. The women work from 8 A.M. to 5-30 P.M. with an interval from 11-30 A.M. to 1 P.M. Besides these fixed intervals, workers leave their work to go to the latrine, eat food, smoke, etc. For this purpose the manager issues 95 passes for distribution among the 836 adult males; no adult male may leave his work without a pass; these 95 passes are found sufficient for 836, and are not exceeded. No passes are required for women and half-timers, who go out as they like. The mill tried working long hours by electric light for 3 months in 1905, but abandoned the experiment as unprofitable; there was a great increase of waste, and the workers who lived at a distance threatened to leave. Examined 55 half-timers; all wore certificates in tin cases, and could be checked at once; the system seems to work well here. Weighed 20 adult males, average weight 110½ lbs. A few immature adults were noticed, all above 14, however, but fit for light work only. Ventilation and fire exits satisfactory. Latrines—39 seats and also separate urinals; they were clean, and there was no waiting outside the latrines. Wages paid fortnightly, keeping nine days' wages in hand.
2	*Cotton spinning and weaving.*—2,315 employés, including 175 females and 113 half-timers. Saw 51 out of 54 half-timers in A set; all had certificates, but 3 or 4 seemed under 9. Saw no immature adults. 48 seats in the latrine; it was very dirty and was supposed to be cleaned by the municipality. Water supply good. Weighed 26 adults, average weight 103 lbs. Ventilation in carding room bad, no windows open. Fire exits as usual, the doors opening inwards. Steps are being taken to put in fans. In this connection it is noted that the present standard of 10 sq. ft. air inlet *per* person is impossible and ridiculous. Got electric light in blow room, but not over whole factory, and never work all night. Hours in mill 5-45 A.M. to 7-30 P.M. with half-hour interval; in the cold weather the hours are from 6-45 to 6-15. Half-timers A set 6-20 to 8-30 and 1 P.M. to 4-45. B set 8-30 to 12-30 and 4-45 to 6-30. This is found to be the best arrangement. Two hundred passes are issued for all the operatives, including women and children.
3	*Cotton spinning and weaving.*—Number of workers—649 men, 48 women, and 85 half-timers; total 782. Examined 45 half-timers and found one physically unfit, 5 apparently under nine years, and the others satisfactory. All were duly certified. Latrines 16, very dirty; they are supposed to be cleaned by the municipality. Water supply insufficient. Fire exits practically useless, stairs being in a dangerous condition, and exits badly placed. One staircase dangerously placed in rope alley way, and steps too high, so as to be dangerous in case of crowding. Ventilation very bad, and no fresh air admitted, all windows being closed, atmosphere very foul. Steam jets and humidifiers both in use. Weighed 18 men, average 103 lbs. (weavers 109 and others 99 lbs.). Mill frequently works by electric light. The following are the hours actually worked for 12 months ending in September 1907:—

Month and year.	No. of days worked.	No. of hours worked.	Average no. of hours per day excluding midday interval.	Longest day.	No. of holidays. Sundays.	No. of holidays. Other days.
		Hrs. Mts.	Hrs. Mts.	Hrs. Mts.		
October 1906	27	345 15	12 47	14 50	2	2
November „	26	354 10	13 37	14 50	2	2
January 1907	27	352 45	13 17	13 25	1	3
February „	23	296 0	12 20	13 45	3	2

AHMEDABAD—*continued.*

Serial no. of factory.	Notes.
3 *contd.*	

Month and year.	No. of days worked.	No. of hours worked.	Average no. of hours *per* day excluding midday interval.	Longest day.	No. of holidays. Sundays.	No. of holidays. Other days.
		Hrs. Mts.	Hrs. Mts.	Hrs. Mts.		
March 1907	26	317 30	12 12	12 40	5	0
April „	26	324 30	12 1	13 .0	3	1
May „	26	347 57	13 22	13 35	3	2
June „	25	354 15	14 10	14 50	5	...
July „	27	398 10	14 18	15 15	2	2
August „	26	354 55	13 39	14 50	...	5
September „	26	362 50	13 57	14 20	2	2
TOTAL	285	3,808 17	13 22	155 20	28	21

The longest working day was the 9th July, when the mill worked from 5-45 A.M. to 9 P.M. with ½ hour's interval at noon. A number of operatives were assembled and questioned : they were unanimously in favour of legislation to restrict hours, and said that they worked long hours of their own accord because if they refused others would be brought in to take their places, and besides they liked the extra pay : but they were exhausted by the long hours and their sight suffered from working by electric light ; they all would welcome restriction of hours—the sunrise to sunset arrangement seemed more acceptable than a fixed number of hours all the year round ; they got no time for rest at home ; they all take their morning meal not at noon but between 9 and 10 A.M. and if anything was over, they eat it in the afternoon between 2 and 4 : their principal meal was taken at night after leaving the mill. Noticed several operatives sitting about outside without passes; the 10 *per cent.* system of passes is evidently not very strictly enforced here. Several of the machines in the mill were much too close together for the safety of the operatives.

4 *Cotton spinning.*—The half-timers at work were examined ; there were 18 children, all were over 9. As the mill was working on a general holiday, the number of half-timers was much smaller than usual. The children were much better developed than those examined in Bombay. Four immature adults were picked out for examination ; all were over 14, and were considered fit for a full day's work. The average daily attendance at the mill is : 204 men, 63 women, 73 half-timers. The present hours of work are from 6-35 A.M. to 6-15 P.M., with the half hour's interval from 12-30 to 1 o'clock. The women work from 7 A.M to 7-30 P.M. with an interval from 11-30 to 1 P.M. Children are employed in two sets—

(*a*) from 6-30 to 12-30. Interval from 9 to 9-30.
(*b*) from 1 to 6-15. Interval from 4 to 4-30.

The mill is fitted with electric light. Ventilation generally good ; the reeling room is underground, and is rather dark. The fire exits were defective ; in the ground floor, there were three exits opening inwards, two being wooden doors, the third an iron sliding door, opening into the rope alley. On the first floor there were no special arrangements. The latrine accommodation is according to the Act ; but the latrines were very filthy, and were situated too far from the mill. Consequently, the operatives utilise the mill compound for purposes of nature. The water supply was excellent. Whitewashing satisfactory. Twelve workers were weighed ; their average weight was 99 lbs. The mill worked from 6-15 to 9 during nine days in October, and for eight days in September. The operatives, as a whole, appeared healthy. Adult's pay Rs. 10-8 a month, with one anna a day extra for overtime, of whatever duration, after sunset. Half-timers get Rs. 3-8 a month, with 8 annas a month for overtime. The women receive Rs. 9-8 a month, with half an anna a day overtime. The pass system is adopted, but is not rigidly adhered to ; 10 *per cent.* of passes are given.

5 *Cotton spinning.*—Thirty-three half-timers were examined, of these two seemed under nine years of age ; but they had been certified by the surgeon. No full-timers were seen who appeared to be under fourteen years of age. Whitewashing satisfactory. Latrine accommodation up to the standard prescribed by the Act ; but all the latrines were very dirty, and they were situated much too far from the mill. Ten operatives weighed, the average was 107 lbs. each. Ventilation good. Cold water spray humidifiers were fitted, but only a few were in use at the time of the Commission's visit. The fire exit arrangements were defective ; the doors opened inwards, and on the first floor the number

Serial no. of factory.	Notes.
5 *contd.*	of exits was insufficient. Further, practically all the windows were battened over with baling hoops, in a lattice-work arrangement, to a height of about six feet. The fencing of the machinery was very good, the plant being almost entirely modern. An exceptionally large number of workers were loitering in the mill compound. The pass system is adopted, 10 *per cent.* of passes being allowed. All are fully utilised, and the system is not rigidly enforced. The mill is not fitted with electric light. In June it worked from 5-30 A.M. to 7-30 P.M., with half an hour's interval. Children are employed in three sets, as follows :— 1st—6-25 to 12-30. Interval from 9 to 9-30. 2nd—1 to 6-15. Interval from 4 to 4-30. 3rd—9 to 4. Interval from 12 to 1-30.
6	*Match factory.*—Employs 146 men, 29 women, and 41 half-timers. The factory works by day-light; the operatives are employed from 7 A.M. to 6 P.M., with an interval from noon to 1-30 ; the half-timers are worked from 10 to 5, with the same interval as for the women. There have been no cases of necrosis during the past ten years. The mixing and drying are done in open sheds, and the arrangements are such that there is practically no danger of phosphorus poisoning. The management have found considerable difficulty in obtaining an adequate supply of labour, though they pay higher wages than in cotton mills. The manager urges that there should be a special exemption for his factory, permitting half-timers in the filling room to work longer hours.
7	*Cotton spinning.*—As many children as could be collected were examined ; out of 29 7 would have been rejected under a physical fitness test. All the children were certified, and were easily identifiable from their certificates. Thirteen immature adults were examined ; of these only 2 had certificates of age. Ten were probably under 14, and would have been rejected had a physical fitness test been prescribed. Latrine had 10 seats ; all very dirty ; no people waiting. The water supply is from the municipal taps and is excellent. There is no reserve cistern. Twelve adults were weighed ; the average weight was 104½ lbs. Ventilation good ; fire exit arrangements not satisfactory, the staircases being neither numerous enough nor made of proper material. The mill was started in June 1906 and the machinery is of the most modern type. Day-light hours only are worked. Considerable difficulty is experienced in getting an adequate supply of labour, the jobbers from other mills entice the operatives away if possible. In such cases it is the custom for the successful mill to pay the worker his wages for the full month, although he may have been in the new mill for a few days only. Last year, the mill was stopped on 37 Sundays and 13 other days, being Hindu or Muhammadan holidays.
8	*Cotton spinning and weaving.*—The mill is new, and is only half working at present. Three hundred hands engaged, of whom 20 are half-timers and 50 women. Difficulty in obtaining weavers ; but the management are able to secure enough of the other hands required. Examined 10 half-timers ; two seemed under nine years, though certified. Fifteen seats in the latrines ; the septic tank system is being adopted. Ventilation and water-supply excellent. All the ground floor doors open inwards ; there is no electric light installation, and no intention of erecting one.
9	*Cotton spinning and weaving.*—Nine hundred men, 59 women, and 135 half-timers ; total 1,094. The mill starts at 6-50 A.M., and closes at 6 P.M. ; the half-hour's interval is between 12-30 and 1 P.M. There is no electric light in the mill. The regular working hours are from sunrise to sunset. In June the work begins at 5-45 A.M., and the mill closes at 7-30 P.M., with the usual half-hour's interval. The half-timers are divided into A and B sets. A gang works from the starting time to 9 A.M., and again from 4 P.M. to the closing time. B gang works from 9 A.M. to 4 P.M. with an interval of half an hour during the general interval in the middle of the day. Examined 41 half-timers ; 5 appeared under 9, and if certificates of physical fitness had been required, 3 would probably have been rejected. No immature adults were found unfit for a full day's work. The latrines had 22 seats, fairly clean, and no people waiting about. Water supply good. Ventilation good everywhere. Fire exits well arranged, but the exit staircase is ricketty and dangerous. Weighed 20 adults from carding and spinning rooms ; average weight 100 lbs. Weighed 15 from the weaving shed, average weight 106½ lbs. One man attends two looms.
10	*Cotton spinning and weaving.*—Number of workers— Adult males . . . . 444 Females . . . . 102 Half-timers . . . . 159 TOTAL 705 Saw 71 half-timers (out of a set of 77) ; of these 9, who appeared over 9 years of age, were not physically fit for a half-day's work, none over 9 seemed unfit, but one had an infections eye complaint. All were certified and were easily identified ; a few certified as over 14 seemed under 14. Latrines clean, 19 seats, septic tank system, the effluent is used for irrigation. Eleven houses provided for workmen. Ventilation and lighting in the mill excellent ; ample provision of fire exits, most doors sliding ones, rest open inwards. Some of the water used for humidifying came from engine condensers

Serial no. of actory.	Notes.
10 *contd.*	and was very impure. Twenty workers weighed 108 lbs. No electric light is used in the mill. Statement of actual working hours is as below :—

	Average hours *per* working day, excluding rest interval.		Longest day.	
	Hrs.	Mts.	Hrs.	Mts.
October 1906	11	28	11	50
November „	11	6	11	20
December „	10	25	10	53
January 1907	10	1	10	50
February „	10	44	11	27
March „	11	36	12	10
April „	12	24	12	50
May „	12	55	13	16
June „	12	50	13	20
July „	12	53	13	15
August „	12	7	12	47
September „	11	48	12	22

Total working days in year 314; holidays were given on 34 Sundays and 47 other days, (10 Hindu and Muhammadan festivals). A statement showing the number of days *per* month (excluding holidays) on which 50 operatives (chosen at random) from the spinning and weaving departments worked is given below. The manager explains that owing to scarcity of labour jobbers from one mill often entice away workers from other mills.

Statement of number of days on which 50 operatives worked during the period between November 1906 and October 1907.

	1906.		1907.									
	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.
Number of days mill worked.	26	26	27	23	27	23	27	25	27	26	26	27
Serial No. of operative.						*Spinning Department.*						
1	14	21	26¾	14	16½	...	...	...	...	...	...	...
2	25¾	25	25½	23	26¼	24½	26½	24½	26½	25	26	23
3	20	23	27	10	...	...	...	...	...	...	...	...
4	25	25¾	17	21	13½	18½	2	...	...	...	...	...
5	26	26	27	23	27	26	27	25	27	26	26	26
6	7	...	...	...	...	...	...	...	...	...	...	...
7	26	26	27	21½	26½	25	27	17	27	18	...	...
8	26	23	27	23	27	25	26½	24½	27	25	26	27
9	21¾	6	...	...	...	...	...	...	...	...	...	...
10	25	25¼	22	13½	25¾	25	26¾	23	27	26	26	27
11	26	23	23	19¼	20	25	23	25	20¾	...	...	...
12	18¼	25	27	21	26	12½	...	...	...	...	...	...
13	26	26	9	...	...	...	...	...	...	...	...	...
14	19½	25	25½	22	23½	14	...	...	...	...	...	...
15	18	17½	19	21	24	2½	...	...	...	...	...	...
16	20¾	13	10½	...	...	...	...	...	...	...	...	...
17	25	26	9	...	...	...	...	...	...	...	...	...
18	25	26	26½	23	26¾	25	27	25	27	26	26	27
19	26	24	27	23	27	22	26	25	25½	19	26	26½
20	26	26	22	16½	27	24	32	25	27	26	26	27
21	25½	26	23	16½	25½	25¾	42½	23½	27	26	26	25
22	22½	25½	26¾	23	27	20	25	23½	24½	22	26	26½
23	26	26	26	23	25	21	27	25	27	26	15	27
24	19½	...	...	...	...	...	...	...	...	...	...	...
25	26	26	23½	14	11	15	...	21½	25½	24½	22	26½
						Weaving Department.						
26	19	25	21	22	26	19	...	16	25½	15	26	27
27	26	25½	27	22	27	23½	26	13	...	...	11	17
28	12	26	23	20	27	24½	27	23	12	...	22	7
29	20	12	..	23	14	21	27	24	27	26	26	16
30	...	23	22	23	16	26	11	25	27	26	6	19
31	14	17	2	22	23	26	4½	23½	27	23	24	26
32	10	18	14	22½	19	...	...	...	...	...	...	...
33	19	2	20	4	...	...	...	...	...	...	...	...
34	20	25	25	15	9	3	21	21	27	26	26	23
35	10	12½	2	23	26	19	13	24	24	21	26	6
36	21	23	27	19	...	...	...	...	...	...	...	...
37	22½	24½	23	12	3	23	23	23½	24	23	10½	9
38	20	26	14	...	...	...	...	...	...	...	...	...
39	22	26	27	22	25	23	25	...	24	25	25	18
40	12	23	26	21	27	24	26	...	12	...	26	14
41	26	26	24	20	11	26	27	21	12	...	...	...
42	24	24	23	20	26	8	...	...	...	...	...	...
43	23	26	25	22	24	18	27	...	26	25	24½	27
44	26	23½	23	21	18	16	26	...	17	23	7½	...
45	16	...	...	...	...	...	...	...	...	...	...	...
46	20	9	...	...	...	...	...	...	...	...	...	...
47	22	21	20	13	15	24	20	16	15	25	22	24
48	25	22½	23	23	24	6	...	...	...	...	...	...
49	22	24	23	23	6	3	23	25	27	26	24	27
50	22	26	27	23	6	4	24	24	27	25	24	25

BROACH—BOMBAY.

Serial no. of factory.	Notes.

BROACH.

11 *Cotton spining and weaving.*—The mill is fitted with electric light; the men complain of this, and say it hurts their eyes. They struck work on account of the use of electric light two days before the Commission arrived at Broach. They were induced to return to work by the manager stating that Government would soon prohibit night working. The men object to the long hours worked, as preventing them from shopping, and attending properly to their private affairs. The compound of the mill was large and in excellent order, sanitation good; the latrines had the proper number of seats, according to the Act, and were very clean and well looked after. Water is obtained from a well; the supply appears to be satisfactory, but the method adopted for distributing the drinking water is susceptible of improvement. Forty-four half-timers were examined, out of a total of 47 on the rolls for the morning shift; 7 appeared under 9, and 4 of those above nine would probably have been rejected under a physical fitness test. All the children were certified, and were easily identified. Twenty-one young adults were examined; 2 appeared to be under 14 years, and 2 others were physically unfit for a full day's work. The mill works from daylight to 7-45 P.M., as a rule; on some days it works till 8-30. The longest day was from 5-35 to 8-30, with the usual interval (10th June 1907). Fifteen men from the carding and spinning department were weighed, average 96·2 lbs. each. Twenty weavers were weighed—average 104 lbs. each, general average 100½ lbs. Eighty-nine passes are issued for 644 men and 124 women. They are not very strict as regards the passes for women, but for men the pass system is strictly enforced. Children come and go as they like without passes. In some cases, the passes are not always fully taken advantage of. The usual meal time of the operatives is from 10 to 11 A.M.; they do not eat, as a rule, during the midday interval. The Company has a chawl for the operatives, with 75 rooms. One family occupies a room, and the rent is eight annas *per* room *per* month. The rooms are 10 × 12, and were in very good condition.

12 *Cotton spinning and weaving.*—The mills work by day-light only; no electric light is fitted. Longest day from 5-33 A.M. to 7-43 P.M. on the 20th June 1907. Shortest day from 6-58 A.M. to 6-43 P.M., with the usual interval. This was in January. Eighty-five half-timers examined, out of 88 on rolls; 4 appeared under 9, and one other over 9 was physically unfit for half-time work. Twenty-five young adults were examined; of these 2 appeared under 14, and 1 of these 2 was physically unfit for a full day's work. Latrine accommodation according to the Act, the seats were rather dirty. The water supply is from a well, and the water is pumped up to convenient places for use. Weighed 58 men—28 from the carding and spinning departments, average 96 lbs., 30 from the weaving department, average 106 lbs. General average 101·4 lbs. Ventilation good, whitewashing satisfactory. There are no emergency fire exits, merely a few narrow iron staircases which would be practically of no use in the event of fire. Three hundred and four men, 117 women, and 180 children are employed. In the separate weaving mills there are 422 adult males. Passes—one for every eight men—are granted. Children are taken out, when they are not required for doffing, by the jobbers. Jobbers are not required to provide labour, as there is no competition. There is no stealing of labour between the few mills here.

BOMBAY.

13 *Cotton spinning and weaving.*—Working time from about 5-30 A.M. to 7 P.M. The mill is fitted with electric light, and the average working day is about 13 hours. 1,280 men, 157 women, no children, employed. There is a half-hour recess at midday. The mill compound is very cramped, the buildings old, and the arrangement of them bad. The fire exits are not suitable, the doors opening inwards. The muster rolls show that the operatives take on an average about 3 days off in the month, in addition to holidays. Thirty-three latrines, many workers waiting at them. The latrines were in a most insanitary condition. The workers, as a body, looked very healthy. Twenty-two immature adults were examined; all were over 14, but as a rule they were not equal to a full day's hard work. Ten adults, employed in mills all their lives, were weighed—average weight 108 lbs. Fifteen men from the spinning department, chosen at random, were weighed—average 98. These were all younger men. General average 102 lbs. Approximately 70 substitutes were employed, and the rolls showed that about 10 *per cent.* of the hands were always absent. Certain of the engine room staff work $\frac{3}{3}\frac{1}{0}$ days a month, without any compensating holidays; they are paid full time for half a day's work on the Sundays and holidays.

14 *Cotton spinning and weaving.*—This is a new mill. Work begins about 5-40 A.M., and the engine runs till 7-15 P.M., with half an hour's recess at midday. The mill is fitted with electric light; the ventilation and lighting were good. Thirty-five latrine seats for 1,800 operatives. No half-timers are employed. The fire exit arrangements were unsatisfactory; few exits are provided, and in many cases the doors open inwards. Out of 1,725 workers on the rolls at the time of inspection, 215 were absent and 60 substitutes were employed. The day, being one of the usual *dewali* holidays, was somewhat

Serial no. of factory.	Notes.
14 *contd.*	exceptional in this respect, however. Fifty immature adults were examined; these were all full-timers. Of these 10 were considered under 14, though they had been passed by medical officers. Extra time is paid for work in excess of $12\frac{1}{2}$ hours a day. The manager estimates that the operatives spend about $1\frac{1}{2}$ hours a day in slacking about in the mill compound. The medical certificate book was examined; the distinctive marks recorded were, in the opinion of the medical members of the Commission, useless. Operatives looked healthy; the number of young adults was higher than usual. Twenty-five mature adults weighed—average 97 lbs.
15	*Cotton spinning.*—According to the register, 22 children were at work on the morning shift; all were produced before the Commission. All were over 9 years of age, but 6 out of the total were weedy, and not up to the normal standard of development. The mill works day and night; no children are employed at night, and only about 60 women, the latter exclusively in the reeling department. During the day 234 women are usually at work there. In order to attract night workers—women—they are paid one and-a-half times the ordinary rate for their production during the night. Compound large and open; ventilation in the mill good. All young adults were inspected; all were over 14, but some were badly developed, and not fit for a full day's work. Fifteen normal workers were weighed; their average was 101 lbs.
16	*Woollen mill.*—No children are employed. Young adults were inspected, but none under 14 years of age were found. The operatives were particularly healthy looking. There is no night working in this mill. The hours are from sunrise to sunset, *i.e.*, the mill works while there is light enough to work properly. Ventilation good. Latrine accommodation ample; but the system is most defective, and the cess-pool had apparently not been emptied for some days. Eleven workers were weighed; their average was 108 lbs.
17	*Dye works.*—Two hundred and forty operatives. No children and women employed. No night work. Electric light is fitted for use in emergencies. All young adults were inspected; none under 14 years of age were discovered, but a few of the young full-time workers were fit only for employment for full time on light work. The factory works from 7 A.M. to 5 P.M. save on special occasions. There is no work after 7 P.M. in any case, as the operatives refuse to work longer than that. Ventilation good. Ten workers weighed, average 108 lbs.
18	*Flour mill.*—Seventy-eight men on the day shift, including coolies, 51 on the night shift, twenty women are employed on light work, they do not work in the machinery rooms. No children are employed. The mill runs throughout the week, during the whole 24 hours, the shifts are from 6 A.M. to 6 P.M. and from 6 P.M. to 6 A.M. The shifts are changed once a week—on Sunday, which is, save in exceptional circumstances, always a holiday. No stated time is fixed for meals; the workers relieve one another. They have approximately one hour off in the course of the day shift, and they can distribute this time as they like. Control is less effective during the night shift, and the period during which the hands are off work is probably greater. The employés are paid, on the 25th of each month, the amounts earned by them during the preceding month. The majority of the hands stay at their work throughout the whole year, and many are old employés of the firm. A bonus is given to the workers each year, the sum depending on the profits made during the year, and the total amount being distributed among those who have been in the employment of the firm for more than one year at the time of the distribution. Men with over three years' service are paid double the sum given to those of over one and less than three years' service. The ventilation in the mill rooms was excellent, the latrine accommodation—5 for 150 men—was in very good condition. The operatives appeared well nourished and healthy; ten men were weighed, average 95 lbs.
19	*Iron works.*—The operatives work 9 hours a day, or 54 a week; for "overtime," *i.e.*, time worked in excess of a total of 54 hours in the week, they are paid at the rate of a full day's pay for eight hours' work. Overtime is not systematically resorted to; speaking generally, the firm find that a nine hours' day is the most economical for their class of work. Working by artificial light is difficult, and not economical; the system was tried, and rejected. The great majority of the employés are skilled workmen, of excellent physique, and they are highly paid. In the circumstances, a detailed examination of the works or operatives was not made.
20	*Flour mill.*—The mill employs about 220 hands all told; they work in day and night shifts, the mill running continuously day and night except on Sundays. The men working on the night shift work on the day shift the following week. Day shift is from 6 A.M. to 6 P.M. and night shift from 6 P.M. to 6 A.M. The night shift only numbers about 60 men, but two or three times a month when special orders are received a few of the day shift are kept till 9 P.M., for this $\frac{1}{4}$ day's wage extra is given. Men are never worked more than 15 hours; the ordinary period is 12 hours. The men have an hour's interval, half of the number from 12-30 P.M. to 1-30 P.M., the other half from 1-30 P.M. to 2-30 P.M. There is no regular interval for the night shift, they arrange their own

Serial no. of factory.	Notes.

20 *contd.* — intervals for eating. No children are employed and only a few women in the day time. Ten employés, who were probably above the general average of the men in the mill, weighed on the average 113 lbs each. In the wheat drying room, the lighting and the ventilation were most defective; throughout the wheat preparing department the ventilation appeared to be inadequate.

21 — *Cotton spinning and weaving.*—Employs 3,500 adult males, 800 adult females, 191 half-timers; total 4,500 hands. Of these about 400 on an average absent themselves daily and from 100 to 125 substitutes are employed. Mill works only by day-light, the longest hours worked in 1906 being 12 hours 51 minutes on 14th June 1906 from 6-2 A.M. to 7-23 P.M., and the shortest 10 hours 53 minutes on 6th December 1906 from 6-55 A.M. to 6-18 P.M., excluding the midday interval. The average number of hours worked a day in each month in 1906 was as follows: January 10 hours 51 minutes February 11 hours 8 minutes, March 11 hours 46 minutes. April 12 hours 5 minutes, May 12 hours 32 minutes, June 12 hours 33 minutes, July 12 hours 21 minutes, August 12 hours 8 minutes, September 10 hours 57 minutes, October 11 hours 19 minutes, November 10 hours 53 minutes, December 10 hours 52 minutes. There is no system of passes for going outside the mill during working hours, but it is estimated that each worker goes out for about 1½ to 2 hours a day. The carding master believes that about 25% of the hands work steadily without taking extra holidays and that the rest take about 3 days "off" a month, excluding Sundays, and many go to their homes for cultivation for 2 or 3 months during the rains. There are about 500 youths certified as over 14 at work; of thesea large proportion appeared to the Commission to be under 14, and immature. Seventy such were actually picked out and marshalled: they all were mere children, though sturdy and of good physique as a rule. Such boys are specially useful, on account of their short stature, for work at ring frames, and command comparatively high wages—from Rs. 7 to Rs. 10½. Examined 155 half-timers: of these 12 seemed under 9, though certified over that age, and 5 would probably have been rejected if certificates of physical fitness were required. On the whole the half-timers, especially the girls, seemed a very healthy lot. Wage of all half-timers is Rs. 4-8. Weighed 20 men in carding and spinning departments, average 102 lbs. The average of 30 in weaving department was 105 lbs.; general average of 50 was 104 lbs. The adults seemed a healthy lot. Carding master states that production *per* hour is higher in short than in long working days. Latrines 94 seats, of which 10 were locked; fairly clean, no waiting about, water supply good, but taps insufficient and a crush of workers round them. Openings for ventilation good if all used. No emergency exits, doors open inwards, fencing good. Mill provides 183 quarters for operatives, rent Rs. 2-8 *per* room. Wages paid on 25th of each month for the previous month. Mill provides a school for the half-timers: about 75% of them attend it voluntarily. The practice here is for all children to remain inside the mill compound, either in the school or outside, during the intervals between their periods of work.

22 — *Cotton spinning and weaving.*—Employs 2,269 adult males, 329 females and 65 half-timers, total 2,653. Half-timers are worked in two shifts—

A	from 6 A.M to 9-30 A.M. / 1 P.M. to 4 P.M.	During the intervals they stop in a room in the compound, where a school is held.
B	„ 9-30 A.M. to 12-30 P.M. / 4 P.M. to 8 P.M.	

The mill worked 15 hours daily in 1905, from 5 A.M. to 8 P.M.; and then from October 1905 till June 1907 tried a 12 hours' day, but has now had to abandon this because the best hands began to leave and go to mills where the hours were longer, and they could therefore earn more. Mill works at present from 6 A.M. to 8 P.M. Examined all half-timers of A shift, 32 in number; six appeared under 9 years, all were physically fit and were a healthy lot. Examined 72 young adults, 24 seemed under 14 years, and 2 of the remainder would have been rejected if certificates of physical fitness had been required. Latrines—60 seats, fairly clean and no people waiting. Water supply good. Guarding of machinery excellent. Ventilation (ridge) excellent. Weighed:—

40	adults from carding and spinning department, average	106 lbs.
30	„ „ weaving „ „ „	104½ „
70	average	105½ lbs.

23 — *Cotton spinning and weaving.*—One of the oldest spinning and weaving mills in Bombay. Employs 1,112 adult males, 231 females, and 28 half-timers; total 1,381. Works at present by day-light only, but in 1905 worked very long hours for some months by electric light, up to 15 hours in some cases (*i. e.*, from 5 A.M. to 8-30 P.M., with midday interval of ½ hour). Examined 13 half-timers, all physically fit, but 3 seemed under 9 years. Selected 20 young adults from spinning department; of these 9 seemed under 14 years, and unfit for a whole day's work. Latrines—26 seats, clean. No waiting. Ventilation good. Weighed:—

20	men from carding and spinning department, average	100½ lbs.
15	„ weaving „ „ „	97 „
35	Average	99 lbs.

Many of the weavers here are elderly men of the *Julai* caste.

BOMBAY—*continued.*

Serial no. of factory.	Notes.
24	*Cotton spinning and weaving.*—Works only by day-light. A comparison of the actual hours worked here with the times of sunrise and sunset given in the almanac shows that work begins ordinarily ¼ hour before sunrise and ends ¼ hour after sunset. Actual working hours range from 13 hours 15 minutes in summer to 11 hours 5 minutes in winter. Number of hands employed is 1,552 adult males, 200 females, and 97 half-timers; total 1,842. Examined 40 half-timers in A shift, 10 of them seemed under 9 years, though certified over that age. In spinning department, 131 young adults were collected, of whom no less than 56 appeared to be under 14 years, and not up to a whole day's work, though apparently certified as over 14 years. Thirty-three seats in latrines; this is below the prescribed standard; no waiting outside. No ridge ventilation in the weaving room. Weighed:— 15 men in carding and spinning department, average 97 lbs. 28 „ weaving „ „ „ 106 „ Average 102 lbs.
25	*Silk mill.*—This silk mill employs 782 adult males and 266 women; total 1,048: no half-timers: it works only by day-light. The shortest day in 1906 was 11 hours 35 minutes, and the longest 13 hours 20 minutes. Examined 21 young adults, all were certified over 14 years, but 6 of them appeared to be under 14. Weighed 20 men, average 111 lbs. Physical condition of operatives good, several of the women were wearing gold ornaments. Ventilation and guarding of machinery good. Arrangements in gassing room excellent, and all men working there looked healthy. Latrine—22 seats, clean; no waiting outside. Water supply good.
26	*Manufacture of tins for casing bulk oil.*—The factory works short hours, and the men all looked healthy: no half-timers. Latrine accommodation specially good, the latrines being connected with the main sewage system.
27	*Cotton spinning and weaving.*—Working hours from 6-4 A.M. to 8-9 P.M. Inspected shortly before 8 P.M. The carding and preparation rooms (the only part of the mill at work) were badly lit, and there was no ventilation, all windows were closed, and the air was hot and oppressive: the perspiring workers looked dull, listless and exhausted, and the few children half-dazed. The workers waited outside the mill after leaving, and in reply to questions stated that they were unanimously in favour of legislation to restrict the hours of labour, though that might entail a decrease of piece-work wages.
28–29	*Cotton spinning and weaving.*—Inspected at about 7-30 P.M. The conditions in both mills were practically identical; a large number of half-timers were at work; the atmosphere was stiflingly hot; and all the windows were closely shut. The temperature in one of the mills, in the spinning room, was 98½ degrees Fahrenheit. The operatives did not appear exhausted. None were loitering about in the compound.
30	*Cotton mill.*—Inspected 8 A.M. on Sunday. Surprise visits were paid to this, and to the following cotton mills down to no. 42, in order to ascertain the extent to which working on Sunday was resorted to. No one working at the mill, except a few mechanics fixing a countershaft.
31	*Cotton mill.*—Portion of boiler staff, engine staff, and a few general mechanics at work, also 15 cloth folders.
32	*Cotton mill.*—In full work; due notice had been given.
33	*Cotton mill.*—Portion of boiler, engine, and general mechanic staff at work.
34	*Cotton mill.*—Boiler, engine, and general mechanic staff at work; also 5 women reelers.
35	*Cotton mill.*—Boiler, engine, and general mechanic staff at work; also 35 folders and cloth stampers.
36 to 42	*Cotton mills.*—No one at work. No cleaning of machinery.
43	*Cotton spinning only.*—Present hours of work are from 5-30 A.M. to 7-30 P.M. in summer and from 6 A.M. to 7-30 P.M. in winter. Mill worked from 5-30 A.M. to 8-30 P.M. in June 1905, when very long hours were being worked elsewhere. No shifts. The mill was stopped, by the courtesy of the manager, at 8 A.M. on the day of the Commission's visit and all hands (male) were mustered outside. There were 889 male full-timers, of whom 204, or 23 *per cent.*, appeared to be under 16 years: of these 29 appeared to be under 14 years, and unfit for a full day's work. There were 20 half-timers, of whom 4 appeared to be under 9 years, though certified as over 9. The general physique of the workers was excellent, there was a remarkable absence of skin disease or other indication of mal-nutrition. Only one had marks of tuberculosis of glands. The men were a big lot, 60 were weighed, giving an average of 102 lbs. The young adults were a healthy lot, half-timers were rather weedy.

BOMBAY—*continued.*

Serial no. of factory.	Notes.
43—*contd.*	The 539 women employed in the mill were inspected at their work: only 15 of them appeared to be under 16: they were generally a healthy lot.
44	*Cotton spinning only.*—The mill employs 520 male adults, 328 females and 34 half-timers, and works only by daylight. When the Commissioners entered the mill there was a general stampede of children to any possible hiding place and it was impossible to inspect them inside the mill: subsequently the management produced from the mill 61 children of whom— (a) four were uncertified half-timers, 3 of them being obviously under 9 years; (b) twenty-four were certified half timers, though the total number in the shift was only 17: there were thus 7 of the second shift working at the wrong time: all appeared over 9 and physically fit; (c) thirty-three were certified full-timers, though 13 of them appeared to be under 14 years. The physique of the adults and children was very good. A so-called school is said to be held in a large cotton bale godown, but the arrangement appeared to be worse than useless, because it only facilitates the breaking of the law as to the working hours of half-timers. The school was not opened when the Commission visited the mill at 9 A.M., though the first shift of half-timers ought to have, but had not, been relieved at 8-45 A.M.
45	*Cotton spinning only.*—The mill employs 661 adult males, 330 females, and 31 half-timers: it works 12 hours a day. Of 14 certified half-timers examined, 2 seemed to be under 9 years. Of 40 young full-timers examined, 14 seemed to be under 14 years, though certified over that age, the others were all physically fit. Weighed 33 adult men, average 97½ lbs. Latrines 24, seats clean and no waiting outside: fire exits ample, some doors open inwards, others outwards. Ventilation good The personal marks entered for purposes of identification in the half-timers' certificates were not sufficiently distinctive to enable a child to be identified beyond doubt—the same marks being frequently entered in different certificates. The certifying surgeon is stated to receive Rs. 30 from the mill for one visit a month, and Rs. 10 extra if a second visit is paid: in November 25 certificates were given by him on the 2nd, and 21 on the 11th.
46	*Cotton spinning and weaving.*—Employs 1,231 male adults, 150 females, and 76 half-timers: works only by daylight. Daily average of absentees is 158, or rather over 10 *per cent.* Half-timers are supposed to work in two sets— A—38 in number from start to 9-30 A.M. and from 1-30 to 4-30 P.M. B—38 in number from 9-30 A.M. to 1 P.M. and from 4 to closing time. But when the Commission visited the mill at 8 A.M. besides all of A set, 33 of B set were inside the mill premises most of these being produced from the spinning department where they had presumably been at work. There is a so-called school held in a large godown, where 3 children were found sitting, Of the 33 half-timers of B set, only 6 could write the simplest words: all of these had been taught in Government schools elsewhere: none of the remaining 27 could write. It is obvious that such a school is useless, and only facilitates infringement of the law. Seventy-one certified half-timers examined, of whom 11 appeared to be under 9 years. Out of a very large number of young adults 66 were examined of whom 13 seemed to be under 14 years. Weighed 30 men of carding and spinning department, average 105 lbs. Weighed 30 men of weaving and spinning departments, average 106 lbs. Men and children were all a strong and healthy lot. Latrines 34, clean and no waiting about. Water-supply and ventilation good.
47	*Oil mill.*—Works day and night with two shifts—day shift of 96 men from 6 A.M. to 6 P.M. and night shift of 88 men from 6 P.M. to 6 A.M., the men changing from day to night shift and *vice versâ* every month. In each shift double the number of men actually required for the work is employed, and each man has one hour's rest after each hour's work, so that a man does only 6 hours' work a day. The work is hard. The workers (all adults) were a strong and healthy lot. Wages Rs. 11-8 to Rs. 18 a month. Average daily number of absentees is only 2 or 3 *per cent.* The men take holidays to their country (Ratnagiri) at least once a year.
48	*Cotton spinning only.*—Mill was stopped, by courtesy of the manager, at 8 A.M. on day of inspection, and all the male operatives were mustered outside and inspected. The total number of whole-timers, male, was 584: of these 142. or 24 *per cent.*, appeared to be below 16 years of age, and of these latter 35 appeared to be below 14 years, and therefore unfit for a full day's work, though certified as over 14 years. The 426 adults, though as a rule slight in build, were in good physical condition: none of them showed any signs of tubercular disease of glands or joints, and there was a remarkable absence of skin disease. Weighed 30 adults (carding and spinning departments); average weight 94 lbs. There were, besides, 16 half-timers, rather an undersized lot, of whom 4 were apparently under 9 years, though certified over that age. The 450 women were inspected at their work: they were a strong healthy looking lot: of the total number about 15, or 3 *per cent.*, appeared to be under 16 years of age.

Serial no. of factory.	Notes.

49 *Cotton spinning and weaving.*—Employs 1,023 male adults, 233 females, 24 half-timers—total 1,280. Works in November from 6 A.M. to 7 P.M. and in June from 5-20 A.M. to 7 P.M. Examined 9 half-timers, all seemed over 9, and in good condition. Found among the adults 17 boys who, though certified to be over 14 years, were apparently under that age, and were not fit for a whole day's work. Latrines 30, seats clean, and no waiting outside. Water supply good, but taps insufficient. Ventilation excellent. Weighed—

15 men from carding and spinning departments, average				98 lbs.
20 „ „ weaving	„	„	„	101 „
Average of 35				100 lbs.

The women in the reeling room were all in good condition, most of them wore at least one gold ornament each. Their earnings are from Rs. 6 to Rs. 12 a month. The daily percentage of absentees during the last month was as follows:—

Carding and spinning department	18·2 %
Weaving „ „	13·4 %
Reeling and winding (womens)	29·6 %

The mill has got some workmen's *chawls* attached. In one room measuring 12′ × 10′ and 9′ high (for which Rs. 4 a month was paid) a mill hand, Ramjee Laxuman, was found living with his aunt, an old woman, and 5 adult boarders, each of whom pays Rs 5-8 a month for board and lodging. The old woman takes their first meal to them at the mill at 7 A.M., then they come back at noon for the midday meal, and they have supper at night after work. Ramjee earns Rs. 16 a month and remits his savings to his native country. In another room with a separate cook-room attached (rent Rs. 7) lived Govind Malu, earning Rs. 12 in the mill, his wife earning Rs. 6, his sister earning Rs. 6, and two children, one of whom earned Rs. 3 as a half-timer.

50 *Cotton pressing.*—Found everything in order, the only work at present (November) is pressing waste for export to Germany.

51 *Cotton spinning and weaving.*—Employs 1,136 adult males, 168 females, and 109 half-timers—total 1,410. Half-timers divided into 2 sets—A, 57 and B, 52. At time of visit (8 A.M.) all A set were in the mill, and of B set (whose turn is not till 9-30 A.M.) 12 were in the mill, and 40 in the so called school. The attendance book of half timers had not been written up for six days. Of 69 certified half-timers examined, 8 were clearly under 9 years. There was a very large number of young adults in this mill, hardly any grown up men being seen in the carding and spinning departments; 47 of the youngest were selected and examined; of these 9 were certainly under 14 years, 4 having 3 or 4 milk teeth indicating 11 years or under. Weighed—

15 adults from carding and spinning departments—average				101 lbs.
40 „ „ weaving	„	„	„	103 „

Operatives were a healthy looking lot.

52 *Cotton spinning and weaving.*—Employs 1,538 male adults, 47 females, and 31 half-timers—total 2,039. Examined 21 half timers, all were over 9 years. Selected and examined 77 young adults from a very large number at work: of these 18 were certainly under 14, and of these 7 were obviously under 12 years, judging by their teeth. Operatives were a healthy lot.

53 *Spinning and weaving.*—Eight miles from Bombay, works only by daylight, 5-48 A.M. to 7-33 P.M. in summer, and 6-55 A.M. to 6-35 P.M. in winter. Employs 1,952 male adults, 586 female adults, and 6-05 half-timers. The reasons for the large number of half timers here are (*a*) that the certifying surgeon in this district has adopted a stricter age test for young adults than the surgeons in Bombay do, and (*b*) that the local population being small, more adults cannot be got. The certifying surgeon as a rule does not pass a child as over 14 years unless he is over 56 inches in height, and otherwise appears over that age. The manager has complained to the district authorities that it is unfair to apply to his operatives a stricter test than obtains in Bombay; and it is a fact that many boys who have been refused certificates as over 14 years here have got employment as full timers in Bombay mills. For half-timers a standard of 48 inches height seems to have been adopted, but children are passed as small as $46\frac{1}{2}$ inches if other signs indicate 9 years. Weighed—

35 men in carding and spinning departments average				106 lbs.
30 „ weaving	„	„	„	110 „
Average of 65				108 lbs.

The men are a heavier and finer lot than in the Bombay mills; examined 260 half-timers, of these 46 appeared to be under 9 years, but all were healthy and fit, with no signs of tuberculosis.

BOMBAY—*continued.*

Serial no. of factory.	Notes.
53—*contd.*	Latrines 67, clean, 20 separate urinals: no waiting about Water-supply and ventilation excellent: fencing especially good. Mill provides 197 rooms in *chawls* for operatives. Manager thinks that discipline of mill hands is getting slacker than before, as men are becoming more independent.
54	*Tanning and boot factory.*—Employs 658 hands, of whom 46 are half timers. Examined 20 half-timers, of whom 2 appeared to be under 9. No cases of anthrax are known ever to have occurred; very little dust Workers are a sturdy lot.
55	*Paper mill.*—Employs 36 men and 36 women: works 12½ hours daily: no night work. Women earn Rs 7½ a month, men from Rs. 10 upwards. Arrangements for extracting dust from rags are very imperfect: a fan is required at the outlet of the willey, and a dust chamber with a steam pipe to lay the dust, which can then be burnt. As it is, the room in which the rags are cut up is filled with dust, which must be highly injurious to the health of the women working there. Some imperfections in the fencing were also noticed and pointed out.
56	*Cotton spinning only.*—The Commission visited the mill at 8-30 P.M. The total number of employés is 1,616 and is made up of male adults 956, female adults 650, and "half-timers" 10. Average number of absentees about 250. The engine starts at 5-45 A.M. and stops at 7-30 P.M with an interval of half an hour at noon. The longest hours were worked in 1905, from 5 45 A.M. to 8-30 P.M. with half an hour's interval. 77 young adults were examined, and of these 13 appeared to be under 14 years of age. There are only 5 half-timers on A shift, and of these 3 were examined; all appeared to be over 9 years of age. Physique of the adult operatives is good, of the young persons fair, and of the children good. The mill is well ventilated. The latrines are clean, and provide 24 seats, which is under the required number, but no persons were waiting about the latrines owing to want of accommodation. 20 employés were weighed, average weight 105 lbs. The fencing of the machinery is satisfactory. The emergency exits are sufficient—sliding doors of iron.
57	*Cotton spinning only.*—The Commission inspected this mill at 7-30 A.M. The total number of employés is 1,114, made up of male adults 676, female adults 415, and half-timers 50. The half-timers are employed in two shifts, which work morning and afternoon respectively. Daily number of absentees about 200. Total number of half-timers examined 14; of these only 1 appeared to be under 9 years of age. Total number of young adults examined 41; of these 11 appeared to be under 14 years of age. The physique of all the operatives, adults, young adults, and children, appeared to be very good. There are 22 seats in the latrines, and the latrines are clean—no persons were waiting about for want of latrine accommodation. The water-supply and the ventilation are satisfactory. The fencing of the machinery is adequate. The engine at present starts at 6 A M and stops at 6-20 P.M., with half an hour's interval. The mill has electric light, but it is not used at present. Longest working hours were in the year 1905 (14½ hours' actual engine working) between 5-30 A.M. and 8-30 P.M. 44 hands were weighed, average weight 102 lbs. Emergency exits ample—mostly iron sliding doors, in other cases the doors open inwards.
58	*Flour mill.*—Employs 128 adult males and 10 females—total 138: works day and night with 2 shifts of work people—6 A.M. to 6 P.M., and 6 P.M to 6 A.M.—the shifts changing from day to night work and *vice versâ* once a week, after the Sunday holiday. Each man of the night shift is allowed to sleep for 2 hours during the night, the times being arranged by the men themselves, and the watchman seeing that no man takes more than 2 hours. Should a man of the night shift fail to come to work, owing to sickness or other cause, the corresponding man of the day shift has to continue working throughout the night, *i.e*, for 24 hours on end (being allowed however 3 hours to go and get his food) and then gets 12 hours' rest, returning in the evening to the night shift—a substitute being engaged for the day. The manager explains that this arrangement is necessary, as substitutes cannot be obtained at night for night work: they only come in the morning. This only applies to the 12 hands in the engine and milling departments. The books show that on an average three men a day work those double shifts of 24 hours, and that no one man worked more than 3 double shifts of 24 hours each in the course of the month. The following were the number of men on double shifts on each day of the month:—

Date.	(47 workers) Milling staff.	(14 workers) Engine staff.	Total.	Date.	Milling staff.	Engine staff.	Total.
1	0	1	1	4	8	0	8
2	0	1	1	5	0	1	1
3	1	1	2	6	0		7

BOMBAY—*continued.*

Serial no. of factory.	Notes.							
	Date.	Milling staff.	Engine staff.	Total.	Date.	Milling staff.	Engine staff.	Total.
58—*contd.*	7	2	5	7	19	0	7 Tuesday.	7
	8	3	3	6	20	2	7 Wednesday.	9
	9	1	2	3	21	0	0	0
	10	0	0	0	22	1	0	1
	11	3	0	3	23	0	0	0
	12	0	7 Tuesday.	7	24	0	0	0
	13	3	7 Wednesday.	10	25	1	0	1
	14	3	0	3	26	2	7 Tuesday.	9
	15	2	0	2	27	2	7 Wednesday.	9
	16	2	0	2	28	1	1	2
	17	0	0	0	29	0	1	1
	18	2	0	2	30	0	1	1
					TOTAL	39	66	105

For the first 6 days of December there were 13 men on double shifts. The engine room workers change shifts on Tuesday, as they are employed all Sunday cleaning the engines.

59 *Wool cleaning and pressing.*—Employs only 22 permanent hands: a number of temporary hands are employed by the owner of the wool: only Indian sheep wool is sorted, no Persian wool: arrangements are fairly good, and there is no dust of a harmful nature: the factory is not under the Act.

60 *Bone crushing mill.*—Employs 35 hands, and is not under the Act: the factory is only an open shed; arrangements seemed to be suitable.

61 *Small steam flour mill.*—Not under the Act; employs 30 men who have frequently to work long hours' overtime. The following number of hours were actually worked, without shifts, on six days in August 1907:—

August 1907.

8th—17 hours.
9th—17 „
10th—12 „
11th—24 „
12th—12 „
13th—24 „

The manager explained that the men had of course to be allowed to go away for their meals at intervals during these long hours; but no shifts were arranged. The ordinary hours are 12 daily, but overtime is worked as the trade demands. Accommodation very cramped.

62 *Cotton spinning and weaving.*—Inspected the operatives in weaving and connected departments with a view to ascertain the percentage of young adults' age, 14—16, in these departments. The following was the result:—

Department.	Total no. of workers.	No. of Boys 14—16.	No. of Women.
Weaving	438	19	...
Winding, drawing, sizing, etc. . . .	156	48	82
TOTAL .	594	67	82

giving 10 young adults (14—16), or 25 young adults and women, *per* 100 workers. In the weaving shed alone the young adults were only 4 *per cent.*

BOMBAY—JALGAON.

Serial no. of factory.	Notes.

63 *Cotton spinning and weaving.*—Inspected the operatives in weaving and connected departments, with a view to ascertain the percentage of young adults, age 14—16, in those departments. The following was the result :—

Department.	Total no. of workers.	No. of	
		Boys 14—16.	Women.
Weaving	990	31	...
Winding, drawing, sizing, etc. . . .	404	60	150
TOTAL .	1,394	91	150

giving 6 young adults, age 14—16, or 17 young adults and women, *per* 100 workers. In two weaving sheds alone the young adults were only 4 *per cent*. Inquiry was made as to hours worked by engine and boiler staff. The boiler staff is divided into 2 shifts—day shift of 35 men who work from 5-30 A.M. to 7 P.M., and night shift of 6 men, on duty from 7 P.M. to 5-30 A.M. ; the engine room hands (29 in number) work from 5-30 A.M. to 7 P.M. ; the mechanic staff (33 hands) work from 7 A.M. to 5-30 P.M. Work on Sunday from daylight to 1 P.M. in cleaning machinery, etc., is treated as overtime, and paid for as one whole day's work. On an average each of the hands in these departments absents himself from work for 3 days a month, exclusive of fixed holidays.

64 *Cotton spinning.*—Employs 833 adult males, 456 females and 12 half-timers. Half-timers are employed in two sets of 6 each. "A" set works from starting of mill to noon, and "B" set from 12-30 P.M. to closing time. "B" set comes to mill in the morning, and saunters about in the compound up to 12-30 P.M. The "A" set after leaving mill at 12 o'clock are kept within the mill premises up to 4 or 4-30 P.M. This is done, it is said, to prevent the children working in another mill. Ventilation good. Water-supply satisfactory. Fire exits satisfactory ; latrines, 48 seats, clean, nobody waiting for admission. Fencing of machinery good. No electric light. The mill works from daylight to dark, all the year round. 23 young adults examined, of whom 4 appeared to be under 14 ; 8 half-timers examined, all appeared to be over 9. Weighed 21 men, average weight 100 lbs.

65 *Cotton spinning.*—Employs 900 adult males, 500 females and 72 half-timers. The latter are employed in two sets, each containing 36. "A" set works from morning to noon, and the "B" set from 12-30 P.M. to closing of mill. General health of operatives good. Ventilation good. Latrines, 20 seats, clean, no one waiting for admission. Water-supply good. 25 half-timers examined, of whom two appeared to be under 9 years of age. Fencing of machinery satisfactory ; fire exits sufficient, but doors open inwards. Examined 28 young adults, of whom 8 appeared to be under 14 years of age. Engine starts at 5-40 A.M. (S.T.) and stops at 12-40 P.M. Starts again at 1-10 and stops at 8-10 (S. T.), total working time 14 hours. In 1905 the working hours were 14½. Mill works with electric light. Weighed 30 men, average weight 100 lbs.

66 *Mint.*—All operatives work 7 hours a day only, except furnacemen who work 8 hours. Wages vary from 8 annas to 12 annas a day for unskilled labour.

67 *Printing press.*—Total number of operatives is 275 to 300 : all are male adults over 17 years. No females or children are employed. The ordinary working hours are from 9 A.M. to 5-30 P.M. with half an hour's interval. Excepting Sundays, the men generally work overtime up to 9 P.M. Two shifts are employed in the newspaper department, the day shift working from 9 A.M. to 9 P.M., and the night shift (consisting of 10 people) from 9 P.M. to 5 A.M. Sunday is observed as a holiday excepting in the newspaper department, in which Saturday is allowed instead. Ordinary wages range from Rs. 8 to Rs. 30 a month. Overtime is paid for at the rate of one pie *per* rupee of the ordinary salary *per* day. The wages for a month are paid on the 25th of the following month.

JALGAON.

68 *Cotton pressing.*—Sixty-five men are employed, and are paid according to the number of bales pressed. Each man gets about 11 annas *per* 100 bales pressed. The opener is the usual type of toothed single opener, only men work in front of it. Atmosphere thick with cotton fluff. Noticed that some cotton lying outside awaiting pressing had been watered to add weight and give softness. Seven women employed in collecting waste cotton from wrappings of unpressed bales.

Serial no. of factory.	Notes.
69	*Cotton pressing.*—Employs 70 men, who are paid as in no. 68 above. Conditions of opener and atmosphere were exactly as in that press. The charge for pressing is Re. 1-6-0 *per* bale, of which 4 annas is refunded to the merchant as rebate at the end of the season. No women employed.
70	*Cotton ginning.*—Is under the Factory Act and works with two separate shifts of women—first shift 5 A.M. to 2 P.M., and second shift from 2 P.M. to 10-30 P.M. There are 28 gins. Each shift consists of 28 women, *plus* 8 extra women as temporary reliefs; each woman is allowed 1 hour's interval in the 9. Total 36 women in each shift, or 72 employed each day. Each woman gets $2\frac{1}{2}$ annas a day for 9 hours' work. The 30 adult males work the whole $17\frac{1}{2}$ hours, and earn about 8 annas a day each. Some of the women at work had their babies with them on the gin platforms. The line shaft is in a hollow between brick walls, and is adequately fenced between the drums.
71	*Cotton ginning.*—Has 60 gins, but of these only 33 were at work. For these 33 women *plus* 11 extra hands or 44 women in all, are employed, at 3 annas a day each; the factory runs from 5 A.M. to 8 P.M. and the 44 women are so employed that each does only 11 hours work a day. The men work the full 15 hours after their own desultory fashion, and get 6 annas a day. There is no scarcity of labour, but manager is of opinion that the women's rate of wages would have to be raised if their hours were increased beyond 11. The line shaft is situated and fenced as in the last factory.
72	*Cotton pressing.*—Employs 70 men, who are supplied by contractors, and earn about 10 to 12 annas a day, being paid by the number of bales pressed. The cotton is removed from in front of the opener by men, no women being employed; atmosphere clouded with particles of cotton.
73	*Cotton ginning.*—The first ginning factory in India, started in 1864. Is under the Factory Act, and employs at present 126 women and 38 men; of a total of 100 gins 77 only were at work, and these work from 5 A.M. to 8 P.M. with half an hour's interval at noon; for these 77 gins 77 women are employed, but in order to give each woman only 11 hours of work, 26 reliefs are also employed who relieve the workers as follows—First 26 gins from 8 A.M. to 11-30 A.M., second 26 gins from 11-30 to 3-30 P.M., and remaining gins from 3-30 P.M. to 7 P.M. The relief system was found to be actually in force on the day of the inspection. Besides these 26 reliefs there are also 23 extra women for sweeping, and looking after gins temporarily. Women are paid 3 annas for all hours work; men 5 annas for daylight hours, and 2 annas extra for work before and after dark. Saturday (the local bazar day) is always observed as the weekly holiday instead of Sunday. The charge for ginning is Rs. 4-4-0 *per* 240 lbs. of cleaned cotton, and the cooly contractor provides the whole labour (exclusive of engine and mechanic staff) at 6 annas for the same unit. The local ginning factories all belong to a combine, and pool profits. The line shaft under the ginning platform is fairly well fenced in: this fencing was only done 3 years ago after a woman had been killed while trying to crawl under the shaft.
74	*Cotton spinning and weaving.*—Employs 917 adult males, 173 females, and 139 half-timers—total 1,229. The register for November 1907 gave the following averages—

Daily average number of operatives on the roll	1,319
„ „ „ „ present	1,189
„ „ „ „ absent	130
„ „ „ substitutes employed	35

This gives an average of 10 *per cent.* absent every day.

Wages average as follows (*per* month)—blow-room and carding Rs. 8, framer Rs. 10, throstle from Rs. 6 to Rs. 12, weaving Rs. 14 to Rs. 15, doffer boys Rs. $6\frac{1}{2}$, reelers (women) Rs. 4, half-timers Rs. 3. Sixty-eight half-timers out of 70 in A set were examined, 6 of them appeared to be under 9 years, though certified over, and 3 of these were physically unfit for work apart from the question of age. One half-timer, who was over 9, was physically unfit. The half-timers seemed generally an underfed, poorly nourished, lot compared with those in Bombay mills. Of the young adults on full-time work 4 seemed to be under 14 years, though certified over. Latrines 29 seats and 10 urinals, not very clean, water-supply and ventilation good. Weighed—

20 male adults of carding and spinning department, average .	107 lbs.
62 „ „ weaving „ „ „ .	113 „
Average of 82 .	111 lbs.

Mill has no electric light and works daylight hours only.

AGRA.

Serial No. of factory.	Notes.
75	*Cotton ginning*—Not under the Factory Act at present. It was originally under the Act, but in 1903 the manager represented that, though the ginning season might extend over 4 months, the factory did not work continuously for 4 months; it was therefore excluded from the operation of the Act. Has 51 gins for which 75 women are engaged; women relieve each other from time to time without regular shifts being fixed. No infants allowed inside the factory. Women earn $2\frac{1}{2}$ to 3 annas a day, and men 4 to 5 annas. Hours of working depend entirely on the season, the factory being worked all night, when necessary, with two shifts. Fencing of line shaft satisfatory: opener used *before* ginning, and is not dangerous; no women are employed at it. No difficulty in obtaining plenty of hands for double shifts.
76	*Cotton ginning*—Under the Factory Act, though circumstances are identical with those of the last factory. The other remarks on the last factory apply to this factory also.
77	*Cotton pressing only*—Not under the Act, no opener used, and all arrangements unobjectionable.
78	*Cotton spinning*—Employs 511 adult males, 76 females, and 62 half-timers—total 349. Examined 22 half-timers, all appeared to be over 9 years, but 2 of them would have been rejected if certificates of physical fitness had been required. Nine young adults were examined one of them appeared to be under 14 years, and two were unfit for a whole day's work. Weighed 24 male adults, average weight $106\frac{1}{2}$ lbs. Workers all seemed a very healthy lot. Ventilation and fencing good. Latrines 15 seats, 3 urinals.
79	*Cotton spinning*—Employs 578 hands, including 68 women and 44 half-timers. Examined 21 of the latter, all were over 9 years and were a strong healthy lot: the age test is apparently applied much more strictly here than in the Bombay Presidency. The number of workers loitering about the compound when the members of the Commission arrived was 75, or 15 *per cent.* of those marked present at work (503). Weighed 20 men—average 110 lbs.
80	*Cotton spinning*—Employs 697 hands, including 79 women and 75 half-timers. A new mill with 20,160 spindles. Arrangements for ventilation, fencing, etc., excellent.
	The above three mills, Nos. 78, 79 and 80, are under the same management, and the conditions of work in each being the same, the following remarks apply to all three:—The working hours are from daylight to 9 P. M., with the usual half-hour's interval from 1 P. M. to 1-30 P. M.; the longest hours are from 5-15 A. M. to 9 P. M. in June and July; and the shortest from 6-45 A. M. to 9 P. M. in December and January, being $15\frac{1}{4}$ and $13\frac{3}{4}$ actual working hours, respectively. These long hours have obtained from the opening of the mills, in the case of one for nearly 20 years. Half-timers work in two sets—(A) from starting time to 1 P.M. and (B) from 1-30 P.M. to 8 P.M., though the children themselves say that (B) set always work on till 9 P.M., and this is confirmed by the adult workers. Half-timers do not carry their age certificates, which are all kept in the office. Women work from starting time to dusk only. The monthly wage for half-timers is Rs. 3, and for full-time boys Rs. 5. Those on piece-work earn on an average as follows—reelers (men and women) Rs. 8 to Rs. 10, cardroom Rs. 8, framer Rs. 12, roving Rs. 11, mules Rs. 25 for winders and Rs. 11 for piecers. As there is no ring spinning, the number of young adults was small. The number of days, excluding holidays, on which a worker absents himself during the month averages from 3 to 4, much the same as in Bombay—the actual number of absentees on the day of inspection being 84 out of 565, or 14 *per cent.* in the first mill; 75 out of 503, or 13 *per cent.* in the second; and 53 out of 644, or 9 *per cent.* in the third. The time spent loitering about in the compound is stated to be much more than in Bombay; to compensate for this, the number of extra hands employed seems to be considerably more than in Bombay, *e.g.*, for one pair of mules of 640 spindles, spinning 10*s*, there are engaged 1 spinner and 6 piecers, against 1 spinner and 4 piecers in Bombay. The managers and European supervisors all leave work at 5 P.M., so that from 5 P.M. till 9 P.M. work is carried on under the supervision of the jobbers only; and it is admitted that between 5 and 9 P.M. the rate of production is considerably lower and the waste greater. Quarters have been built for a number of the mill workers—500 rooms, at a monthly rent of 6 annas a room—and more are under construction.

ALIGARH—HATHRAS—CAWNPORE.

Serial no. of factory.	Notes.

ALIGARH.

81 *Cotton ginning.*—The factory has 45 gins (double) for which 45 women, *plus* 12 spare, or 57 in all, are employed. The factory works as a rule from 8 A.M. to 8 P.M. with an hour's interval at noon; but in a busy year it works for 24 hours a day with two shifts of 12 hours each, and occasionally as much as 16 hours with one shift only. The hands are supplied by a contractor, who keeps no attendance register, but gives each worker a check every day. The workers are paid at the end of the week. No attendance register has hitherto been kept by the mill manager, only the total number of workers present daily being entered in the books. It is therefore impossible to ascertain whether the law as regards hours of work for women is complied with. Fencing of machinery sufficient except at one place. Usual wage in ginning factories in Aligarh is 3 annas for a woman, and 4 to 5 annas for a man. Labour is plentiful.

82 *Cotton ginning.*—The factory has 52 gins, which were worked last year either by double sets for 24 hours, or by single sets up to 14 hours. The manager admits that in previous years he has engaged only one woman *per* gin, without any spare hands, when working by single shift; so that the law as to the hours of employment of women must have been transgressed. Fencing of machinery adequate.

HATHRAS.

83 *Cotton ginning and pressing.*—There are 2 separate ginning factories, of 50 and 36 gins respectively, which work fairly regularly from 6 A.M. to 8 P.M. with half an hour's interval at noon. Last year, for the 50 gins 50 hands, *plus* 4 spare hands, or 54 in all, were employed; and for the 36 gins, 36 *plus* 3 spare hands. This gives the women more than 11 hours a day; and the law has apparently been transgressed in this respect. Regular attendance rolls are kept here, and the hands are paid direct, not through a contractor. The opener is fitted with a lattice delivery, which prevents any chance of accident from stones.

84 *Cotton spinning.*—The mill has 20,800 spindles, of which 8,200 are ring and 12,600 mule; it employs 502 adult males, 58 women and 185 half-timers, or a total of 745 hands. By the courtesy of the manager, the mill was stopped for an hour, and all the hands (male) were mustered outside for inspection. The physical condition of all was very good, the half-timers being an exceptionally fine healthy lot. Of the 372 adult males (excluding mechanics, etc.) 72, or about 19 *per cent.*, were between the ages of 14 and 17. All the 104 half-timers examined seemed to be over 9, and all were physically fit. Weighed 30 full grown men, average 106 lbs. The working hours are always from dawn till 8 P.M. The operatives asked some time ago for a reduction to 7 P.M. in the summer months, as they got exhausted by the great heat, but the request was not granted. The manager, who had some years' experience in a Bombay mill, stated that the operatives are not so good as the Bombay mill-workers, and that 9 men were required to do what 7 or 8 men would do in Bombay. For a pair of mules of 750 spindles each—which would require 7 men in Bombay—9 men are employed here, and as a rule not more than 5 of these 9 would be found present at their mules at any one time. There is much loitering about in the compound, and the manager estimated that the men do not do more than 10 hours' actual work a day. Monthly wages are as follows:—half-timer doffers Rs. 2-8-0, others Rs. 3; when boys become full-timers they get Rs. 5, and when fit for piecing (after one to three months) they get Rs. 7. Reelers (mostly men here) earn Rs. 10 to Rs. 14 a month, working till 8 P.M. like the rest of the hands. During the ginning season, the half-timers are said to work for the other half of the day in the ginning factories. A school was started for the half-timers about 2 years ago, but it had to be closed after 3 months for want of pupils. Fencing of machinery sufficient and ventilation good. Some houses are being built by the proprietors for the mill-workers; they have superior rooms 12′ × 10′, costing Rs. 500 each, and others measuring 9′ × 10′ costing Rs. 250.

CAWNPORE.

85 *Cotton spinning and weaving.*—The mill employs in the spinning department 1,242 adult males, 409 half-timers, and 145 females; in the weaving department there are 636 adult males. It works daylight hours only, from April to October, and with electric light from October to April, up to about 8 P.M.—that is, an average of about 13 or 13½ hours daily. 150 half-timers were examined; 35 of them seemed to be under 9 years, and many would have been rejected as physically unfit, if certificates of physical fitness were necessary, chiefly on account of spleen. Almost all the half-timers examined stated that they were actually employed for full time. The manager has recently abandoned the practice of having half-timers certified for age by the Civil Surgeon, and employs them at his own risk. There is a large number of young full-timers in the spinning department, and the department evidently could not be run

Serial no. of factory.	Notes.
85—*contd.*	without this class of workers. In one factory building 73 young full-timers were counted, and of these a number seemed, without close examination, to be under 14. Weighed 10 adults in spinning department—average 103 lbs., and 26 weavers—average 108 lbs. The average monthly earnings are as follows :—Weaver on two looms Rs. 16, mule spinner Rs. 25, piecer Rs. 14, full-timers on ring frames Rs. 6-8-0, half-timers Rs. 3-4-0. The manager is of opinion that there has been a great improvement in skill and application of the operatives during the last 20 years, but they are still much behind the Bombay mill hand. A system of passes permitting the workers to go outside for eating, etc., is in force—12 passes *per* 100 hands being issued. This represents $1\frac{1}{2}$ hours' absence *per* man in the 13 hours. Fencing of machinery, ventilation, and latrines quite satisfactory.
86	*Woollen mill.*—The mill employs 1,600 adult males and 215 females. There are no half-timers. The average daily working hours are 10 hours 20 minutes, and the actual hours worked vary from $11\frac{3}{4}$ hours to $9\frac{1}{2}$ hours. The midday interval is one hour, except from May till August, when 2 hours are given. An accurate system of checking temporary absences from the work rooms is in force, with the result that an average workman probably does not leave his work during working hours for more than half an hour a day. Overtime up to 9-30 P.M. was worked in the tailoring department (engine not running) for 74 days in 1905, 74 days in 1906, and 55 days in 1907, always in order to comply with urgent orders. About 220 of the hands, *i.e.*, 14 *per cent.*, are between the ages of 14 and 16. Women are employed in sorting wool, and earn 3 annas a day; some had their infants with them in the wool-sorting room. Examined 26 of the youngest looking workers; all were over 14 years, except one who, though certified over 14 years, was apparently under that age. The mill gets the Civil Surgeon to certify all doubtful cases of children about 14 years. Weighed 28 adults, average $106\frac{1}{2}$ lbs. Latrines 42 seats. Sanitation, ventilation and fencing excellent. Sundays are invariably given as holidays, and on an average 4 other holidays also a year. The Company has provided a settlement containing 452 houses let at nominal rents, which accommodate about one-third of the operatives.
87	*Flour mill.*—The mill employs 111 men and 4 women. There are no half-timers. It works day and night by double shifts, the day-shift men changing to the night shift after the Sunday holiday. The usual Sunday holiday is given, the mill stopping at 6 A.M. on Sunday, and the workmen being kept till noon to clean machinery.
88	*Jute spinning and weaving.*—The mill employs at present only 156 adult males and 27 half-timers. It works by daylight only. All the half-timers actually work full-time, and earn about Rs. 3-4-0 a month. Examined 22 half-timers, of these 4 appeared to be under 9 years, and 8 had not been certified; they were a fair lot physically. Some of the certificates signed by the Civil Surgeon were not dated.
89	*Cotton spinning and weaving, &c.*—The mill employs 2,089 adult males, 108 women and 168 half-timers, or a total of 2,365 hands. The actual hours of work average about 13 throughout the year. The mill works by daylight only in the hot weather, and with the aid of electric light in the cold weather. Until recently, half-timers were not sent to the Civil surgeon to be certified, the manager employing them as half-timers or full-timers on his own responsibility; but this system has now been abandoned, and half-timers are examined by the surgeon. A number of very young boys were noticed at full-time work, but there was not time to examine them. There are buildings inside the factory premises in which tent-making and weaving are carried on solely by hand labour. Fencing, ventilation, and sanitation excellent. Weighed 21 adult workers, average 106 lbs.
90	*Leather factory.*—The factory employs 2,750 adult males, 36 females and 218 half-timers. The work is chiefly hand work. The actual working hours are about $10\frac{1}{2}$ in winter and 11 in summer, but overtime is worked on occasions to fulfil Government contracts in time of war. Half-timers are not employed in shifts, but are all supposed to come at 8 A.M., and leave at 3-30 P.M.; as a matter of fact, most, if not all, of them work full-time both here and in the other factories at Cawnpore. Arrangements for ventilation and sanitation are excellent; a very suitable type of urinal has been adopted here. The Company has built a settlement of 900 houses for its operatives.
91	*Leather factory.*—Employs 620 adult males and 72 half-timers. The remarks as to hours of work and half-timers in No. 90 apply here generally.
92	*Cotton spinning and weaving, &c.*—The factory employs 1,636 adult males, 76 females and 160 half-timers. The working hours average about 12 a day. The management, after trying a longer day some years ago, found a 12 hours day the most economical arrangement. Thirty half-timers were examined; all were above 9 years, and all

Serial no. of factory.	Notes.

92—*contd.* admitted that they worked full-time. They, and the other boys noticed in the mill, were a poor lot physically. Weighed 70 adult weavers, average 111 lbs. Arrangements for ventilation and sanitation excellent.

93 *Cotton ginning and pressing.*—The factory employs 100 men and 65 women; it works in a busy season day and night, with separate day and night shifts, working 12 hours each. Women tend the gins in the night shift, and the manager states that it would be impossible to get men to do the work. Line shaft is fenced in with moveable wooden covers.

94 *Oil pressing and cotton ginning.*—The oil mill works day and night, the first shift of men working from 6 A.M. to noon, and again from 6 P.M. to midnight; and the second shift from 12-30 P.M. to 6 P.M. and from midnight to 6 A.M. The machinery is insufficiently fenced. The line shaft in the ginning factory is separated from the seed-collecting alley by a wire fence only.

95 *Government harness and saddlery factory.*—The factory employs 2,421 male adults and 59 half-timers. It works 8 hours a day (6 hours on Saturdays) or 46 hours a week, throughout the year Besides Sundays, 25 holidays are given in the year. Almost all the work is either piece or contract work, and an average workman is not absent from his work for more than 20 to 30 minutes a day. The men could well work longer hours, and most of them are said to do private work at home after leaving the factory. The half-timers are all in the pay of the contract-workers and most of them work full-time. Piece work rates are calculated so as to give an average workman 6½ annas for a fair day's work.

96 *Cotton spinning and weaving.*—The mill employs 2,358 adult males, 175 females and 163 half-timers. Examined 125 half-timers, of these 10 appeared to be under 9 years, though certified over that age, and 4 were uncertified, though they had been working for 3 months. They were generally a poor lot, with much eye and skin disease. The manager admitted that, as elsewhere in Cawnpore, they all worked full-time. There is a school on the premises where the boys are supposed to be taught English by a master who does not know that language; the master states that all the half-timers go into the mill in the morning, he then goes and begs the over-lookers to give him a few boys to teach, and generally succeeds in getting about a dozen. All hands are made to come on Sundays for about 2 hours to clean machinery. Weighed 24 men in the spinning department—average 109½ lbs., and 42 weavers—average 108½ lbs. Until July 1906 this mill worked not less than 13 hours a day; from August 1906 to February 1907 the hours were 12½, and since then the mill has always worked 12 hours only. The manager states that the actual production in the 12 hours day is as much or more than it was in the 13 hours day, and gives the following figures for 5 pairs of mules, selected as those on which the attendance of spinners was most regular:—

Mule No.	Production.		Wages earned.			
	May 1906 (13 hours) average 20s in lbs.	May 1907 (12 hours) average 20s in lbs.	May 1906.		May 1907.	
			Spinner.	Piecers 5.	Spinner.	Piecers 5.
			Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
21 and 22 ...	7,102	8,201	14 3 0	35 7 0	16 6 0	40 15 0
23 and 24 ...	8,786	8,194	17 8 0	43 12 0	16 6 0	40 15 0
25 and 26 ...	7,593	8,096	15 3 0	37 15 0	16 3 0	40 7 0
33 and 34 ...	10,437	12,190	20 14 0	52 3 0	24 6 0	60 15 0
34 and 35 ...	10,024	10,732	20 0 0	50 0 0	21 7 0	53 11 0
Total ...	43,942	47,413	87 12 0	219 5 0	94 12 0	236 15 0

The manager considers that the 12 hours day is more economical, and is liked better by the operatives than a longer day. Weaving is done only by daylight, there being no electric light in the weaving shed. Of the weavers 286 men tend 2 looms each, and 360 one loom each. There are a number of young boys, from 14 to 16 years of age, employed on weaving here.

LUCKNOW.

97 *Paper mill.*—The mill employs 564 male adults and 84 half-timers. There are no women. It works day and night with double shifts of 12 hours each, changing at 6 A.M. and 6 P.M. The mill stops at 6 P.M. on Saturdays and starts again at 6 A.M. on Monday; all hands come to clean machinery from 7 A.M. to 11 A.M. on Sundays, any work after

LUCKNOW—CALCUTTA.

Serial no. of factory.	Notes.
97—*contd.*	11 A. M. being paid for as overtime. Workers are allowed an interval of one hour at noon, but the engine continues running, and any men who choose to work during the interval are paid for one hour's overtime. Overtime is paid for at the rate of 8 hours work counting as a complete day. The daily number of absentees is large, averaging from 70 to 80; and to fill these temporary vacancies 40 "reserve" coolies are entertained. Occasionally a man of the day shift has to work for an absentee of the night shift; in such a case he works for 3 consecutive shifts of 12 hours each, but is allowed 3 hours' rest between each change, *i.e.*, six hours in all. The hands recently applied for a reduction of hours, but it was not granted. Examined 31 half-timers employed in the rag-dusting department; all were over 9 years, and were a strong lot. Certification has apparently been carefully done. Half-timers work only by day, and apparently do a full day's work, and there is no system of half-time shifts. Examined 20 young persons; all seemed to be over 14 years, and were a good lot physically.
98	*Printing press.*—The press employs 361 adult males and 29 half-timers. The hours for machine printing are 6 A. M. to 6 P. M. in summer, and 7 A. M. to 7 P. M. in winter. The hand-presses work by day-light only as a rule. The half-timers in the hand-press department are stated to come to work not before 9 A. M.; they certainly do not leave before dark, and they work much more than the legal hours, there being no system of half-time shifts. They are a healthy-looking lot.
99	*Cotton spinning.*—The mill has 5,000 spindles, and employs 175 men, 8 women, and 49 half-timers, of whom 15 have not been certified by the Civil Surgeon though they have been at work for about 2 months. The working hours are from 6-45 A.M. to 9 P. M., with the midday interval of half an hour. There is no system of half-time shifts, all the half-timers doing the full days work of $13\frac{3}{4}$ hours. The proprietor admits that this is the practice, and pleads scarcity of labour. Examined 39 half-timers; 9 of them appeared to be under 9 years, and 3 of them were probably not over 7 years, being very small and unfit for any work. The children as a whole were a poor, weakly lot.
100	*Iron works*—The works employ 244 men and 21 half-timers. The hours of work are from 7 A.M. to 5 P.M., with one hour's interval at noon; but overtime is worked, mostly by blacksmith and fitters, up to 9 P.M. for 90 days, on an average, in a year. In December 1907 overtime was worked on 15 days to comply with an urgent order for famine relief work tools. Overtime is paid for at the rate of 8 hours counting as a full day. Half-timers are supposed to work only from 8 A.M to 4 P.M., but this restriction of hours is not strictly observed in practice.
101	*Flour mills, &c.*—The mill employs 115 adult males. There are no women or half-timers. It works only day-light hours, except occasionally when light work is carried on by a separate shift to supply urgent demands.

CALCUTTA.

102 *Jute spinning and weaving.*—The mill employs 2,482 adult males, 385 women and 376 half-timers :—total 3,243. Hours of work are always from 5 A.M. to 8 P.M., and there is no stoppage of the engine for a midday interval. In the batching, preparing, and spinning, the adult males work by relays as follows :—

First set from 5 to 9 A.M and 12 to 8 P.M.,

Second set from 9 A M. to 8 P.M.,

Third set from 5 A.M. to 3 P.M.,

Fourth set from 5 to 12 noon and 3 to 8 P.M.

These sets have no half-hour intervals at any fixed times, but go out for the purpose of drinking, etc., as they like. The half-timers work in two shifts, the first from 5 to 9 A.M and 12 to 3 P. M., the second from 9 to 12 noon and 3 to 8 P.M.; no half-hour interval is given at any fixed times to these shifts, but they are allowed to go out as convenient. The weavers work from 5 A M. to 8 P.M., with an interval of one hour between 8 A.M. and 12 noon, and half an hour between 4 and 6 P M.; these intervals are taken by mutual arrangement among each set of four weavers. In the winding deparment the hands, chiefly women, apparently work somewhat irregular hours, but it is admitted that some come at 5 A.M. and do not go till 8 P.M., taking an interval of 2 hours or more during the day. Examined 97 half-timers; 17 of these appeared to be under 9 years; they were a poor lot physically, and some were very thin. The practice is to have the half-timers certified by the certifying surgeon at the mill, but no certificates had been granted since the 5th March 1907, *i.e.*, for 10 months, and many of these half-timers, including the 17 under

CALCUTTA—*continued*.

Serial no. of factory.	Note.
102—*contd.*	9, were uncertified. Weighed 24 men in batching department average 103 lbs. 11 ,, ,, spinning ,, ,, 99½ ,, 12 ,, ,, weaving ,, ,, 115 ,, 47 — 105 In the spinning department a large number of boys apparently under 14 years are working full-time, and a number of young adults just over 14 were also observed. Wages are paid weekly; the half-timers get Re. 1-2-9, full-timers Rs. 2-5-0 to Rs. 2-9-0 a week, and on piece-work winders earn Rs. 3 and weavers up to Rs. 6 a week. Latrines 29 seats and 2 urinals. Rope alley way fencing deficient. Some dwellings for workers have been built outside the mill, the rent charged is 4 annas *per* week for a room.
103	*Jute spinning and weaving.*—The mill works from 5 A.M. to 8 P.M. by shifts; all the workers know their timings, the shift system is undoubtedly in practical operation, and the fixed hours are adhered to. No male adult works for longer than 11 hours a day. The half-timers work in two shifts. A shift from 5 A.M. to 8-30 A.M., and again from 12 noon to 3-30 P.M.,—B shift from 8-30 A.M. to noon, and again from 3-30 P.M. to 8 P.M. These hours have been arranged so as to fit in with the adult working hours, though the result is that one shift works for eight hours, and the other for seven hours only. Out of 120 half-timers working in the mill at the time of the Commission's visit, 73 were produced. Of these 12 were under 9 years of age. The half-timers were a poor lot. The certifying surgeon comes, on an average, four times in the year to the mill to inspect the children. Sixty-seven children, working in the mill, were awaiting inspection at the time of the Commission's visit, the doctor being due on the next day. Of 10 young adults selected for examination, 2 seemed under 14 years of age. They were all of poor physique. Half-timers are not presented again for medical examination before being taken on as full-timers; their age is calculated from the original certificates. The manager states that the production in the 15 hours day is less in the spinning and preparing departments than in a 10 hours day in Dundee; he has had a long experience in both places. The weavers are all piece workers, working unrestrictedly as regards hours while the mill runs. They must turn out a reasonable amount of work from their looms, however; but the limit is a low one. Their average production is about 60 *per cent.* of the possible production, as compared with about 80 *per cent.* in Dundee. The majority of the weavers clean their looms on Sundays, though they could easily clean them on Saturday night. Coolies are employed to clean the machinery in the spinning and preparing departments on Sundays. The women's hours are the same as those of the men working in the same shifts. Ventilation and fencing good. The three mills employ 5,671 men, 1,611 women, and 1,146 children—total 8,428. For daily wage men, time after 7 P.M. is paid for as overtime, at the ordinary daily rate. Wages are paid weekly. All the hands live close to the mills; and there have been no labour difficulties except in the very hot months of the year. The mills do not provide houses for the operatives. 20 men were weighed—the average was 108 lbs.
103	*Jute pressing.*—The press employs about 60 permanent hands, the other hands are temporary coolies engaged by the mill or the balers. All are full-grown men. Working hours are usually from 6 A.M. to 6 P.M., sometimes in the busy season till 8 P.M. Some of the men working the presses earn up to Rs. 1-8-0 a day; they are paid by the number of bales pressed, and are so quick at the work that each bale is pressed and lashed in from 60 to 90 seconds. Many of the workers are *uriyas*; they work for 6 months in the year, and then return to their country to cultivate their lands. The work is so heavy that they cannot stand more than 6 months of it at a time, and when working they do not as a rule work more than 20 days a month. In a working day of 12 hours each man does 8 hours' *actual* work, 15 men being provided for one press requiring 10 hands to work it. Sunday working is permitted by special notification under the Act.
104	*Jute spinning and pressing.*—The mill employs about 4,000 hands, including 650 women and 700 half-timers. The hours are from 5 A.M. to 8 P.M. for the spinning department (by electric light), and from 4-40 A.M. to 8 P.M. for weavers, who relieve each other for intervals of rest, one "daily" weaver paid by the mill being provided for each set of 7 looms. The Commission noticed a large number of children under 9 working as half-timers, probably from 40 to 50 *per cent.* of the total number of half-timers. Some of them were only about 3 feet high and obviously not over 6 years of age. Photographs were taken of some of them. The manager was obliged to admit that the law prohibiting the employment of children under 9 years as half-timers, and of children under 14 years as full-timers, was not observed. The mill used previously to get the Government certifying surgeon to examine children for age, but it abandoned this practice, and the manager states that children are now examined for age by the Company's doctor only. He admits that a strict enforcement of the law as regards child labour would affect the supply of labour considerably. Weighed 20 adult workers, average 110½ lbs.

CALCUTTA—*continued.*

Serial no. of factory.	Notes.
105	*Jute spinning and weaving.*—The mill employs about 3,000 hands, including 600 women and 350 half-timers. It works by day-light only, for about $11\frac{3}{4}$ hours at present (end of January); the longest day is 14 hours from 5 A.M. to 7 P.M. There is no general stoppage of work at midday. In the spinning department the adults work in shifts, no one doing more than 9 hours a day. The weavers are at work nominally for the whole day, but they arrange periods of rest among themselves. Half-timers work in two shifts—the first from 6 A.M. to 9 A.M. and 12 to 3 P.M. and the second from 9 to 12 noon, and from 3 to 6 P.M. The Commission noticed a very large number of children under 9 (some not more than 6 years old) working as half-timers, and the manager admitted that in this respect the law was not enforced. It was likewise noticed by the Commission, and admitted by the manager, that a number of children under 14 were working as full-timers. The manager urged that in the event of the law as to child labour being strictly enforced, sufficient previous working should be given to mills to enable them to put their "houses in order"; he said that when the age of half-timers was raised by the Act of 1891 from 7—12 years to 9—14 years, an endeavour was made at first to enforce the regulation, but this was soon abandoned, and children are now employed exactly as they were when the legal age was 7—12. He thinks that 10 hours a day is as much as a young boy of 14—16 years can work, and that there should be a reduction in the 9-year limit for half-timers, it being prescribed that they should not work before 6 A.M. nor after 6 P.M. This mill adjoins a mill which works from 5 A.M. to 8 P.M., and no difficulty is experienced in getting hands to work the shorter hours, though their earnings may not be so large. A weaver earns up to Rs. 5-4-0 a week, against a maximum of Rs. 6 in the adjoining mill. Ventilation and fencing good. Latrine on septic tank system—40 seats. The mill has built 460 rooms accommodating at present 1,100 workers, for which a monthly rent of 12 annas each room in charged.
106	*Paper mill.*—The mill employs about 1,050 hands, including 170 women and 80 children. It works day and night, stopping only from midnight on Saturday to midnight on Sunday, the shifts changing at 6 A.M. and 6 P.M. The day shift gets 2 hours off for meals at different hours. The half-timers are stated to work intermittently for 9 or 10 hours, and are not divided into regular shifts; the law restricting their hours to 7 is apparently not enforced. Women are employed chiefly on the picking and sorting of grass. Men earn 5 to 8 annas, and women $3\frac{1}{2}$ to 4 annas, a day. General arrangement was good, except that the fencing of machinery had not been properly carried out.
107	*Jute spinning and weaving.*—The mill employs about 11,641 hands. The working hours are as follows:— (i) In the preparing and spinning department, from 5 A. M. to 8 P. M., the hands working in shifts so that no worker does over 10 or 11 hours; (ii) in the weaving department from 4 A. M. to 8-30 P. M., and sometimes to 9 P. M. on Saturday, without shifts; but the weavers each get one hour off between 7 and 11 A. M., and another hour between 1 and 5 P. M. (the men on every four looms forming a set to relieve each other) besides shorter unregulated periods aggregating one hour a day for going to latrine, drinking, etc., leaving the hours *actually* worked at about $13\frac{1}{2}$. The half-timers are in two shifts:— (*a*) from 5 to 9 A. M., and from 12 to 4 P. M.—total 8 hours; (*b*) from 9 to 12 noon, and from 4 to 8 P. M.—total 7 hours. Each half-timer works three days in (*a*) shift and three days in (*b*) shift every week. No stated intervals of rest are given as required by the Act, and there is no explanation of the eight hours employment of half-timers, except that the actual hours of working are much reduced by idling. A large number of half-timers are never presented to the certifying surgeon for examination. The register showed that out of 159 recently employed only 25 have been passed by the certifying surgeon. The Commission noticed a large number of very small children, from six to eight years of age, at work. The manager admitted that a very large number of boys under 14 years of age are employed as full-timers. The application of the shift system with its shorter hours *per* worker to the spinners is explained by the fact that most of the work is done by young boys who could not possibly stand longer hours, the work in spinning jute being much heavier than in spinning cotton, on account of the more frequent doffing, and because everything is heavier. On the other hand the weavers are all full grown adults, who are apparently ready to work at very high pressure for 5 or 6 months, so that they can then take leave on their large savings. The men themselves say that they could not stand the long hours without taking frequent spells of leave, for at least three months a year. The weekly cleaning of machinery is done on Sunday by a number of the hands (about one-third of the full complement in the spinning

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107—*contd.*	department) who come of their own accord, and get extra pay for the work. Arrangements for ventilation, sanitation and fencing are perfect. Weighed 30 adult males, average 109 lbs.
108	*Flour mill.*—The mill employs 218 adult males only; it works ordinarily both day and night, the day shift working from 6 A. M. to 8 P. M., with a two-hour interval of rest for each man, and the night shift from 8 P. M. to 6 A. M., without intervals. The two hours from 6 to 8 P. M., in excess of 12 hours, are paid for as overtime. A man earns from Rs. 11 to Rs. 14 a month. Very occasionally, one or two of the day hands are called on to take the night work of absentees; in such cases two men work 5 hours each. Special attention seems to be paid to cleanliness and sanitation.
109	*Iron works.*—The works employ nearly 4,000 hands, including 130 half-timers. The working hours are from 8 to 12-30 P. M., and from 1 to 5 P. M.—8½ hours daily: Overtime is worked at night only for emergency work, on an average only for one or two nights a month, and then only in particular departments. The half-timers are not paid directly by the Company, but are in the employment of the *mistris* who do work by contract; they are as a rule young lads brought to learn the work. Though none under 9 years was observed, 96 had apparently not been certified by the certifying surgeon.
110	*Cotton spinning*—The mill employs at present 895 men, 56 women, and 221 half-timers. It works only a 10-hours day (8 A. M. to 6 P. M. at present.), without shifts. The manager states that the mill hands here will not work more than 10 hours a day, that he tried to get them to work 10½ hours some years ago, but there was no more production, and the hands had apparently decided against longer hours, so he went back to the 10 hours day. The Bengali millhand must get his hour and a half or two hours some time in the day for cooking, etc., most of them will not eat food brought cooked to the mill, hence the shorter hours both here and also under the shift system. For going out to drink, visiting the latrines, etc., during work hours, a maximum of 3 periods of 20 minutes each is allowed to each person (this is controlled by a system of passes) but this is generally not given in full. There is close European supervision over each department. The half-timers are stated to be employed as follows:— A Set ... (1) 8—11 A. M., and 12—4 P. M. (2) 8—12 noon, and 1—4 P. M. B Set ... (1) 10—1 P. M., and 2—6 P. M. (2) 10—2 P. M., and 3—6 P. M. Examined 19 half-timers; all had been certified for age, but 5 appeared to the Commission to be under 9 years, though the certifying surgeon who was present believed that with one exception they were over 9 years. The wages of adults are paid monthly, those of half-timers weekly. The mill operatives as a class seem to prefer work in a jute mill to that in a cotton mill.
111	*Jute spinning and weaving.*—The mill employs nearly 7,000 workers, of whom about 8 *per cent.* only are half-timers. The working hours are from 5 A. M. to 8 P. M., the adults in preparing and spinning departments working by shifts arranged so that no one works more than 10 hours a day. There is no midday interval. The system of shifts in force look rather complicated when reduced to writing, but the Commission satisfied themselves that it is actually carried out in practice; every workman questioned by them knew exactly the hours he had to work. The workers are split up into small gangs under *sirdars* who see that the reliefs are carried out; and the hands themselves see that they are not kept at work longer than their fixed hours. Both here and in all other jute mills in Calcutta wages are paid weekly on Saturday for the previous week. A bonus of one anna a day is given to every man who has put in a full attendance for the week, and the manager states that about 90 *per cent.* of the hands earn this bonus. The workers take, on an average, one month's leave in every six. The certification of half-timers is not properly carried out; it is admitted that about 25 *per cent.* of the half-timers are under 9 years, and have not been put up for examination by the certifying surgeon because it was thought improbable that he would pass them. The Commission observed large number of very small boys at work, and actually picked out 13 half-timers who were certainly under 9 years. One of them was not more than 6 years. They were a poor, weedy lot. Thirty boys, who were obviously under 14 years, were also noticed working as full-timers. The children are certified for age by a local native doctor in the employ of this and an adjacent mill. It was stated to the Commission that this arrangement was made with the sanction of the Government. The factory inspector had not visited the mill for 9 months. Ventilation, sanitation and fencing of machinery good. About 1,800 well-built houses have been provided by the mill for the workers, with shops, schools and a post office; the settlement is excellently arranged, and is stated to give a return of 7 *per cent.* on the outlay. Weighed 15 adult workers, average 111 lbs.

CALCUTTA—*continued.*

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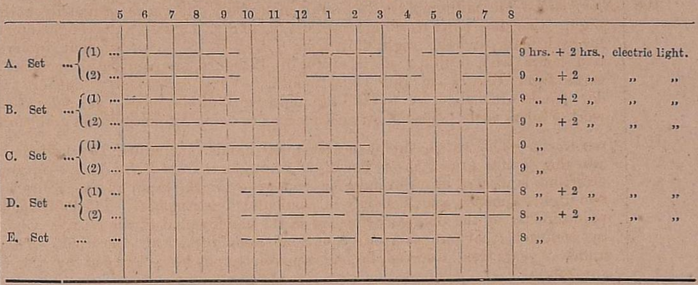
112	*Jute spinning and weaving.*—The mill employs about 5,500 hands, including about 700 half-timers The working hours are from 5 A.M. to 8 P.M., the adults in the preparing and spinning departments working by shifts as follows:—



The system appears complicated on paper, but is apparently actually worked up to, the *sirdars* or headmen in charge of gangs of from 15 to 50 hands arranging the reliefs so as to suit the convenience and wishes of the workers. All the workers questioned by the Commission knew the exact hours at which they were expected to begin and leave off work. The system is specially suited to the natives of Bengal, few of whom will eat food brought cooked to the mill. They must have a sufficient interval either before or during working hours to cook, eat, and bathe, at their houses. Work at night by electric light is paid for extra. The manager estimates that hands do not take more than 20 minutes each a day, during their actual hours of work, outside the building for drinking, etc. For this 5 *per cent.* extra hands are entertained. These restricted working hours have been in force in the jute trade from the first, and the system is thoroughly understood and apparently liked by the workers. The half-timer shifts are arranged as follows:—A shift from 5 to 9 A.M. and from 4 30 to 8 P.M.; B shift from 9 to 4-30. The half-timers are said to get half-an-hour's interval of rest at odd times. Weavers, beamers, winders and sewers are paid by the piece, and their hours are not restricted; but they do not in practice work over 12 hours each. In the weaving department the men on every 4 narrow looms form a separate set and arrange among themselves when one of their number goes out; in the case of broad looms 5 men are engaged for every 4 looms, the fifth man being usually a learner or in waiting for a loom of his own, and being paid a weekly wage of from Rs. 2-8-0 to Rs. 3-0-0 by the mill. A good weaver earns from Rs. 5 to Rs. 6 a week. Beamers, too, work in sets of 4, one extra—a fifth relief—man being given by the mill. Winders are paid by the number of bobbins taken off and handed in by each person, 30 *per cent.* more hands than the machines require being entertained to provide for temporary reliefs and absences from work. In the hand-sewing of sacks there is no attempt to restrict the hours even of the women and children; whole families come, men, women and children, and sit down to work, coming and going as they please. The cleaning of machinery is done on Saturday night; on Sunday only men for repairing machinery are called, and a special gang of coolies to sweep up. On the Sunday previous to the inspection only 86 men, including mechanics, worked. The certifying of half-timers is not properly seen to; and it is admitted that many children believed to be under 9 years are not brought before the certifying surgeon for examination. A large number of such children were observed by the Commission. The certifying surgeon had not visited the mill for 7 months. He is only paid 4 annas a child passed by him, and no fee is paid for a child examined and not passed. It was further noticed that many children obviously under 14 were employed on full time. There is no midday stoppage of the mill here, or in any of the jute mills in Calcutta, even though the weaving department is not worked by shifts. The reason given is that a half hour stoppage would reduce production to a much greater extent than the actual time would indicate, on account of the delay in getting all hands to work again. A number of infants and non-working children were seen inside the mill. Fencing and ventilation were excellent. Latrines, 90 seats, on septic tank system, were clean.

113	*Soap factory.*—It employs 116 men and 105 half-timers. The working hours are from 8 A.M. to 5 P.M., with half an hour's interval from 1 to 1-30 P.M. The half-timers do not work by shifts, but all work the full hours of the factory, *viz* $8\frac{1}{2}$ hours, in spite of the law restricting their work to 7 hours. They are employed on light work, *e.g.* box-making, and look a bright, healthy lot of boys. A very clean, well arranged factory.

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114	*Cotton spinning and weaving.*—The mill employs 1,958 adult males, 238 women and 242 half-timers—total 2,438 hands. The working hours are from 7-30 A.M to 7-30 P.M. in the spinning department and from 6 A.M to 7-30 P.M. (6-30 A.M. to 6 P.M. in a recent addition which has no electric light) in the weaving department. There is only one engine to drive both departments, and it is found possible to work one department when the other is not at work. Though no regular shift system is in force, there is no midday interval given in the spinning department, as required by law. Nor are the half-timers arranged in shifts—they all come at 7-30 A.M. and leave at 7-30 P.M. The manager says that the number of hands employed is sufficient to allow each of the boys at least two hours away from the mill, and that the clerks or *sirdars* arrange the time for letting each boy go. The boys say they get only one hour to go home for food, and that they work the same hours as the men. In either case, whether the hours are 10 or 11, the law restricting half-timers to 7 hours of work is infringed. The boys looked a bright, healthy lot; but many of them were obviously under 9 years. The certifying surgeon had not been to the mill or certified any children for 7 months. The so-called 'half-timers' get from Rs. 3-4-0 to Rs 4-8-0 a month, 'full-time' boys from Rs. 5 to Rs. 7-8-0; weavers earn on an average Rs. 17 a month, though a few earn as much as Rs. 30. Women are chiefly on the drawing frames; they work the same hours as the men. No notice stating the times of the intervals of rest for women and children is exhibited, as required by law. Sunday is given as the weekly holiday, except on two days in the year, when an Indian holiday is observed instead: in addition, the mill is closed on 6 other Indian holidays. No scarcity of hands has ever been experienced here, and it is stated that the work is more popular than that in a cotton mill. The Bengali seems to make an indifferent weaver; with the exception of two or three hands all the weavers are upcountry men from Cawnpore, etc. For each pair of mules with 1,420 spindles only one spinner, two piecers and one reeler are engaged. The Kestner system of humidifying and ventilating has been introduced, and seems very efficient. Weighed 20 weavers, average 112 lbs.
115	*Jute spinning and weaving.*—The mill employs about 6,000 hands. The machinery is driven by electricity generated on the premises. The arrangements throughout the mill are excellent, but the usual number of underage half-timers were observed.
116	*Cotton spinning.*—The mill has 34,000 spindles, and employs about 500 adult males, 25 women and 120 half-timers. The working hours are from daylight to dark, without shifts, but the manager states that extra hands are employed so that the workers are relieved at different hours arranged by the headmen to take their food, etc., Nominally the half-timers are divided into 3 shifts, but inquiry showed that in practice most, if not all, of them work the same hours as the full-timers, coming in the morning and going at night, and getting irregular intervals of rest during working hours. There is no stoppage of the mill for half an hour at noon, as required by the Act. The workers, men and boys, seemed to be a weaklier lot than in the adjacent jute mills. The special factory inspector had not been to the mill for 18 months.
117	*Chemical works.*—The works employ about 100 hands, all adult males except 4 or 5 youths between 14 and 16 years; there are none below 14 years. The working hours are from 6 A.M. to 5 P.M. with an interval of rest from 12 noon to 2 P.M. Acids are the chief article manufactured. Any continuous processes are worked by shifts of 8 men, relieved at fixed hours—those who have to do night duty going off day duty at 2 P.M. and returning to work from 10 P.M. to 6 A.M., so that no man has night duty oftener than once in 3 days. The men like the work, and do not change about much. A new-comer commences on Rs. 8 a month, and rises to Rs. 15, a rice allowance of Rs. 1½ being given to each man. Any work after 5 P.M. is treated as overtime.
118	*Cotton spinning.*—The mill employs about 2,000 hands. The working hours at present are from 8 A.M. to 8-30 P.M. Here as in other Calcutta cotton mills visited— (i) the half-timers do not really work in shifts, but with few exceptions work the full hours of the mill, each getting an hour or so at different times arranged by the headmen to take their food, and (ii) there is no stoppage of the whole mill between noon and 2 P.M. as required by the Act. There is no shift system for adults; all work the full hours of the mill, getting intervals for rest at times fixed by the headmen. The manager states that the late start at 8 A.M. enables the men to take a meal before coming in the morning, and so there is less going out during the day. In the ring spinning department, out of about 70 half-timers 12 very small children, apparently under 9 years, were observed. Wages are paid weekly. Labour is scarce, though in adjacent jute mills there is no scarcity.

CALCUTTA—*continued.*

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118—*contd.*	The higher wages and more comfortable conditions of work in a jute mill are the apparent reasons for this. The Commission was struck by the hot, oppressive atmosphere in this mill compared with the comparative airiness of an adjacent jute mill, which was a fair sample of all the Calcutta jute mills.
119	*Sugar refinery.*—The refinery employs 551 hands, including 25 boys (all over 14 years) and 10 women. It works day and night by shifts, the first shift from 8 A.M. to 4 P.M., the second from 4 P.M. to midnight, and the third from midnight to 8 A.M. Any man working over 8 hours in the 24 is paid for overtime. The amount of overtime worked does not appear to be excessive.
120	*Electric power station.*—The works employ about 100 men, including mechanics in the repair shop. No women or children are employed Men are employed in fixed watches, divided into 3 shifts. The first is from 8 A.M. to 4 P.M., the second from 4 P.M. to midnight, and the third from midnight to 8 A.M. Men in the workshop work from 8 A.M. to 5 P.M. Nothing to find fault with in regard to the hours of work, ventilation, sanitation, etc.
121	*Rope works.*—The ropery employs 226 men, 21 women and 48 children. The working hours are from 8 A.M. to 5 P.M., with an interval of rest from 1 P.M. to 1-30 P.M. Half-timers work the same hours as adults. A man earns about Rs. 10, and a boy about Rs. 5, a month. The hands are regular in attendance, about half of them, on an average, taking no days off during a month.
122	*Oil mill.*—The mill works day and night with two shifts of men, changing at 6 A.M. and 6 P.M.
123	*Silk weaving.*—The mill employs 148 men, 14 women, and no half-timers. It works day-light hours only, with one hour's interval from noon to 1 P.M. The weavers earn from Rs. 20 to Rs. 25 a month, but the supply of skilled labour is short. Men come for two hours every Sunday to clean their looms.
124	*Jute spinning and weaving.*—The mill employs about 7,150 hands, of whom 1,355 are children, and 600 women. The working hours are from 5 A.M. to 8 P.M. The working children were watched entering and leaving the mill at the time of the midday shift; a large number of half-timers, who were obviously under 9 years (one or two between 6 and 7 years), were noticed. The operatives are mostly Bengalis living in surrounding villages up to 3 or 4 miles off. The first warning mill whistle is blown at 3 A.M. Enquiry showed that an half-timer, a child of not more than 7 years, selected by the Commission at random, had to leave his home every morning at 4 A.M. and walk 2 miles to the mill. The mill manager states that an agitation is going on among the workers for a later start in the morning. Weighed 20 adult weavers, all Bengalis, average 101 lbs. Fencing ample, latrines, 80 seats, clean.
125	*Cotton spinning and weaving.*—The mill employs 680 adult males, 227 women, and 83 half-timers. The working hours are from 5 A.M. to 8 P.M., with two hours' stoppage of the mill from 11-30 A.M. to 1-30 P.M.—total 13 hours without shifts. The half-timers, some of whom were very small and obviously under 9 years, admittedly work these full hours, the same as the adults. The present system of certifying children for age, without noting marks of identification, is almost useless; one child selected at random, who was certainly not over 7 years of age, held a certificate for 10 years, and presumably this could have been obtained only by substitution at the time of examination. The weaving master, who has served for some years in Bombay mills, considers that the weavers here (mostly Cawnpore and Agra men) are from 15 to 20 *per cent.* inferior to the Bombay weavers; the daily output of a good weaver here is only 16 lbs. of cloth 66 inches or 72 inches wide, whereas a Bombay weaver would produce up to 20 lbs. of the same cloth. The weaving master estimates that, out of the 13 working hours, a weaver is away nearly 2 hours from his loom. The weavers all say they want a 12 hours' working day, with a midday interval of half an hour, *i. e.* 12½ hours from start to finish. Latrines disgracefully dirty. Special factory Inspector's last visit was eleven months ago.
126	*Jute spinning and weaving.*—The mill employs 5,680 adult males, 1,118 women, and 778 half-timers—total 7,576. The hours of working are from daylight to dark; the workers in the spinning department are arranged in 3 shifts as follows:— A from start to 9 A.M., and from 12 noon to close. B from start to 12 noon, and from 3 P.M. to close. C from 9 A.M. to close. It is explained that during the period from 3 P.M. to the close, when all three shifts are present, each man gets about an hour off by arrangement with the headman. The weavers work the full day without shifts, and without extra hands being provided by

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126—*contd.* the mill, each set of four men relieving each other for intervals of rest. There is no cleaning of machinery on Sunday, and the mill stop always at 5 P. M. on Saturday to give time for cleaning them. The half-timers were about the smallest lot seen by the Commission, a large number being under 9 and some only about 6 years.

This mill was specially visited as it works only day-light hours, without electric light, alongside a mill working from 5 A.M. to 8 P.M., and the Commission wished to ascertain the result in respect of the supply of labour, production, etc. The manager stated that there is a scarcity of weavers in the cold weather, when the working day is short, because many hands leave him for mills which work by electricity, returning to his mill in the longer day of the hot weather. The production is also worse, comparatively, in the cold weather, because the mill has to take on inferior weavers then. The weavers are paid on their production, a 'stent' (task) of 12 'cuts' in the hot weather months and 10 'cuts' in the cold weather being fixed, and any production over that being paid for at higher rates. The weavers appear to be content with the length of the working day in the hot weather, and to want an equally long one in the cold weather. There is no special scarcity of labour in the spinning department, and the hands there seem to like ten working hours. The manager, personally, approves of a fixed day from 5-30 A.M. to 6-30 P.M., with a half holiday on Saturday. Thirty Europeans are employed here, and they would all like a shorter day though they might lose the 'electric light' allowance.

After visiting the mill, inquiries were made outside from a number of hands employed both in this mill and in the adjacent mill working from 5 A.M. to 8 P.M. The result was to show clearly that there is no unanimity among the *weavers* here on the subject of the restriction of hours; many of the upcountry hands prefer the long hours from 5 A.M to 8 P.M., and stated that they had changed from the one mill to the other so as to be able to work those hours; the local (Bengali) weavers seemed on the whole to prefer the shorter hours, complaining particularly of the very early start (5 A.M.) in electric-lit mills, as many of them lived at some distance from their work. It was the unanimous opinion of those in the *spinning* department who were questioned that 5 A.M. was too early to commence work, especially for the young children. It was difficult to keep them awake at their work at that hour.

127 *Jute spinning and weaving.*—The mill employs 4,326 adult males, 1,515 females, and 969 half-timers—total 6,810. The following information as to the work people is interesting:—

Hindus	5,003.	Local men	1,154.	Living in Company's lines	1,338.
Mahommadans	1,807.	Upcountry men	5,656.	Living in villages	4,318.

The working hours are from 5 A.M. to 8 P.M., with the usual shifts in the preparing and spinning departments. The manager states that when a twelve-hours working day was tried for 6 months, from January to June in 1904, it was found that the work improved, production being better in proportion to the number of hours worked; he could not state what the percentage of improvement was. It is admitted that the hours for the weavers are sometimes from 4-30 A.M. to 8-30 P.M., with intervals for rest as arranged by themselves, but each weaver must be present at 4-30 A.M., and must not leave till 8-30 P.M. The manager thinks that with a twelve-hours day the hands would not go away for such long periods of leave in the hot weather, and that the shortage of production due to shorter hours would be made up to some extent by better production during the hot weather months. At present many looms stand idle during the hot weather owing to the absence of the weavers, and the shortage of production from this cause sometimes amounts to 10 *per cent.* The manager thinks the men would not object to a shorter day, and that it could be introduced gradually, without serious difficulty. The hands on fixed wages would lose the extra pay which they get for work by electric light, but even at present one-third of them do not get this extra money.

Here, as in almost all the jute mills on the Hugli, there is an excellent system of septic tank latrines, which in some cases are made available also for the population outside the mill premises. The arrangements could hardly be improved on, and similarly those for sanitation, water-supply, etc., are generally admirable.

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128 *Jute baling.*—The press employs about 1,000 adult males, and 40 boys, in the season. The working hours are usually from daylight to dark, but at the height of the season work occasionally goes on from 5 A.M. to 8 P.M. As in other jute presses the work is seasonal, and lasts for 8 months a year at the most, August and September being the busiest months. All the work is done by contract—the press company arranging with one principal contractor who sublets the different operations (sorting, pressing, etc.) to smaller contractors. The press company keep no registers of men, women or children employed, and make no direct payments of wages to them; as far as the company is concerned the basis of payment is the number of bales pressed. Boys are employed only on the making of string and rope for baling; some under 14 were observed at work. The management admit that no attempt is made to get these children certified for age, or to restrict their hours of working, and apparently the Factory Inspector (Civil Surgeon of Dacca) has never attempted to enforce the law in this respect. It seems to have been thought that, as the whole work was done by contract, it was not necessary for the company to enforce the provisions of the Act. The hands take intervals for rest, meals, etc., as arranged among themselves; there is no general stoppage of pressing work for a midday interval; work is only rather slacker when a number of men go outside. The control of the workers and their work is left entirely to the contractors; the company engage only the engine mechanics and the office clerks. The workers are a strong, healthy lot; weighed 20 men, average 108 lbs.

129 *Jute baling.*—The system of working is as described in No. 128.

130 *Jute baling.*—The system of working is as described in No. 128.

131 *Cotton ginning and pressing.*—The season is from the middle of January to the end of July, the cotton coming from the hill-tracts of Assam and Tippera. The factory employs 300 to 400 hands, all of whom are paid on the piece-work system by a contractor, the company keeping no register of names of women and children employed. The women are employed in separating and sorting the cotton, and earn from 4 to 6 annas a day. A number of children were observed with their mothers. The 30 gins are worked by men who get about 7 annas a day. Three men are employed for each two gins, so as to allow for reliefs. The usual working hours are from 6 A.M. to 6 P.M., but on rare occasions (only 3 or 4 days last year) work goes on up to 9 P.M., the men being paid overtime. There is an 'opener' in use; it delivers upwards, and there is no danger to the men employed on it.

132 *Jute pressing.*—There are seven *pukka* presses, employing about 2,000 hands, of whom 1,400 (including about 100 women) are engaged in sorting the jute, and the rest in carrying and pressing. In the assorting department there are no fixed hours, the workers come and go as they please, being paid by piece-work by a contractor, and earning from 10 to 12 annas a day. The air in the assorting rooms was thick with fluff; no children were observed there. The men on the presses work, as a rule, from 6 A.M. to 6 P.M. and very occasionally up to 9 P.M.; they are brought and paid by a contractor, who gets so much a bale from the company. The men arrange among themselves for intervals of rest; probably none work over 8 hours a day, as the work is so hard. 18 men are engaged for each press, though a press can be worked by 7 men only. The average daily earnings of a pressman are 10 annas. The factory is inspected frequently by the Civil Surgeon of Dacca, who is said never to have objected to the presence of the young children in the sheds. A strict enforcement of the Act as to women and children would not inconvenience the company. The latrines are not inside the premises, but in the coolie lines 300 yards distant; there are 92 seats. There are coolie lines to house 2,500 persons, the floor space of a room varying from 10′ × 10′ to 20′ × 20′; the houses are very clean and sanitary; there is a supply of filtered water and concrete washing platforms. Most of the hands are up-countrymen who come back year after year; the local men are not strong enough for the work of *pukka* pressing, but are engaged elsewhere in Naraingunj on *kachcha* pressing.

MAULMAIN.

133 *Saw mill.*—The mill employs 379 hands, of whom 69 are Burmese, 268 Tamils or Telugus, 9 other Hindus, 31 Chittagonians, and 2 Chinese; no half-timers, and only one or two women, are employed. There are only a few of the workers between the age of 14 and 18 years, and most of these are learners. The hours of work are from 6 A.M. to 5-30 P.M., with an interval of 1½ hours from 11 A.M. to 12-30 P.M. Work stops at 4-30 P.M. on Saturday. No work is ever done on Sunday, and besides Sundays about 12 other holidays are given in a year, *viz.*, 2 Hindu, 8 Burmese, and 2 Christian holidays. An average wage for an Indian labourer is Rs. 15 a month.

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Serial no. of factory.	Notes.
	Burmans are employed on work which requires skill, *e. g.*, the cutting up of the logs, and they receive generally higher wages, ranging from Rs. 30 to Rs. 60 a month. Attendance is fairly regular, but the Indian workmen go to their homes in the Madras Presidency once every two or three years.
134	*Rice mill.*—The mill employs 54 hands (in 2 shifts—of 27 each) in the milling department; these are all permanent hands engaged by the mill and receive about Rs. 15 monthly pay. Besides these, there are a large number of coolies, as many as 250 in the busy season, employed in carrying paddy from boats to the "hopper," and in taking rice back to the boats. These men are paid by contractors, and earn as much as one rupee a day, the mill paying the contractor according to the number of bags. Only one or two boys are employed outside on tallying rice-bags, and two women are engaged in testing samples of rice by counting the number of broken grains in a hundred. The hours of work are :— (*a*) from 6 A.M. to 6 P.M. for about $3\frac{1}{2}$ months; (*b*) from 6 A.M. to 10 P.M. for about 1 month; (*c*) day and night working (with 2 shifts) for about $1\frac{1}{2}$ months. The mill is shut down for about 6 months. It is essential to get the whole paddy crop milled by the end of March, before the early showers of rain come, because storage accommodation in this part of Burma is scanty, and one shower of rain would spoil any paddy lying in the open. There is no stoppage of the mill for a mid-day interval, but each worker gets $1\frac{1}{2}$ hours off work in the 12 at such time as the headman can arrange to let him go. There is very little going out and in apart from this customary interval. When the mill works from 6 A.M. to 10 P.M., the men get another short interval between 6 P.M. and 10 P.M.; they are paid at the rate of $1\frac{1}{2}$ days' wages for this long day, and are always sorry when the whole night working has to be introduced, and they have to work in 12-hour shifts. The contract coolies are all Madrasis or Chittagonians. The sturdy Madrasi (Coringi) carries a bag of rice weighing 224 lbs.; the less sturdy carry baskets of paddy, weighing 100 lbs., to the hopper. Attendance during the month is very regular, coolies being seldom absent, even for one day, except on account of sickness. When the mill is shut down, the permanent milling hands are mostly kept on to clean machinery, etc.; the coolies get employment in cultivating for Burmans or in other work, while some go home to India. There is some shortage of outside coolies at the height of the rice season, but no shortage of milling hands. No Burmans work in the mill. The mill is inspected once a year by the medical inspector and once by the factory inspector. Only the milling department is treated as coming under the Factory Act; the coolies carrying paddy to the godown and hopper, and rice from the mill to the godown or boats, are treated as not under the Act. This is in accordance with an order issued by the Local Government in 1897.
135	*Saw mill.*—The mill employs about 50 hands, all adult males. The working hours are from 6-30 A.M. to 11 A.M. and from 12-30 P.M. to 5-30 P.M.—a total of $9\frac{1}{2}$ hours, extending to 10 hours in the longer days.
136	*Saw mill.*—The mill employs about 200 hands, all adult males over 18 years. The conditions of work are similar to those described under no. 133. The working hours are from 6 A.M. to 11 A.M., and from 12-30 P.M. to 5-30 P.M., or a little longer in the hot weather. An ordinary coolie's wage is Rs. 12 a month, with the right to take away a bundle of firewood every day; this has been the rate of wages for the last 20 years. The saw mills can get men at this wage (which is low compared with wages earned in adjacent rice mills) because they give permanent employment and free fuel.
137	*Rice mill.*—The mill employs in the milling department 72 hands, in 2 shifts of 36 each; all are adult males over 18 years; it also employs in the outside department 169 coolies in the daytime and 39 at night; the only children employed are one or two boys who tally the baskets of rice. No women are employed. The conditions of work are generally the same as those described in no. 134. The ordinary hours are from 6 A.M. to 6 P.M., each man getting away for two hours as arranged by the headman, but the mill not being stopped. For a few days the hours are extended from 6 A.M. to 10 P.M., and then day and night working with double shifts commences in January and goes on till the end of March. The mill is shut down for 5 months. The latrines have 6 seats, over the creek; this is the system adopted in all the Maulmain factories.

MAULMAIN—RANGOON.

Serial no. of factory.	Notes.
138	*Tile factory.*—The factory employs 75 hands, all adult males over 18 years. The hours are from 6 A.M. to 11 A.M., and from 12-30 P.M. to 6 P.M., except for firemen, who are in three watches of 8 hours each as follows:— (1) from 12 night to 4 A.M., and from noon to 4 P.M. (2) from 4 A.M. to 8 A.M., and from 4 P.M. to 8 P.M. (3) from 8 A.M. to 12 noon, and from 8 P.M. to midnight. The workers are stated to take two good meals a day, at noon and at night, besides a light meal before coming to work in the morning. The factory does not work in the monsoon.
139	*Rice mill.*—The mill employs 30 hands in the milling and up to 250 in the outside department. The working hours are as in nos. 134 and 137, except that when work goes on for 24 hours the shifts are relieved at noon and midnight, so as to give each man six hours of day-light and six of night work. The men have no regular interval; those who come at midnight eat before they come, and on leaving at noon, and have something brought to them in the mill at 6 A.M.; those coming at noon eat before coming, and have something brought at 6 P.M. When work goes on from 6 A.M. to 10 P.M. without a shift, a few extra men are employed and each man is allowed to go home to eat in turn: extra pay is given for work over 12 hours. When only day-light hours are worked (6 A.M. to 6 P.M.) each man is allowed to go home in turn for 1½ hours. When the hours are from 6 A.M. to 10 P.M., each man is actually at work in the mill for about 14 hours. The outside coolies, under contractors, work generally for 6 hours at a time; one set from 6 A.M. to noon, and from 6 P.M. to midnight, and another from noon to 6 P.M., and from midnight to 6 A.M.
	RANGOON.
140	*Rice mill.*—The mill employs about 200 hands inside the mill, and 700 outside coolies. For about 2½ months the mill works day and night, with two shifts of workers who are relieved at 6 A.M. and 6 P.M.; at other times the working hours are from 6 A.M. to 6 P.M. There are no fixed hours for meals, and no midday stoppage of the mill. The workers get short intervals of rest at different times, as arranged by the headmen. Women are employed both on carrying paddy to the godowns and on sewing up the bags of rice, and work the same hours as the men—day and night; those sewing bags are not actually at work for more than 8 hours out of the 12; A shift consists of 18 women, and only 12 of these are generally at work at one time; they earn from Rs. 3 to Rs. 4 a week each. No children are employed. Only the hands inside the mill are paid by the company; the outside coolies are all employed by contractors, who are paid so much *per* 100 baskets of rice by the company, and they pay their own coolies. The coolies carrying paddy in 50 lbs. baskets from the boats to the godown are all Tamils, and earn from 8 to 12 annas a day; the coolies carrying 224 lbs. bags of rice are Coringis, and earn from one to two rupees a day. Weighed 22 Tamil coolies—average 110 lbs.; and 20 Coringi coolies—average 125 lbs. The fencing of the line shafts, and belting, etc., is insufficient. The only latrines are outside the mill premises, in the coolie lines; they are very insanitary. The mill hands and coolies employed here, as well as in all the other factories inspected in Burma, are a strong healthy lot of men. The Coringis who carry 224 lbs. bags of rice are of very powerful physique; the Tamils and Chittagonians employed in the mill and in carrying 50 lbs. baskets of paddy are of smaller build, but are good types of their class. There are no signs of deterioration of physique anywhere. Comparatively few Burmese are employed.
141	*Rice mill.*—The mill employs 250 men (in two shifts of 150 and 100 respectively) in the milling department, 300 men in two shifts at the hopper, 100 men sewing bags, and 1,000 outside coolies. The hours of work and the arrangements of the shifts are the same as in no. 140. A few boys under 14 years were noticed carrying 50 lbs. baskets of paddy from the boats to the godowns. The sewing up of bags, which was done in no. 140 by women, is here done by men. The fencing of machinery is well done, and fans have been fixed, where possible, to clear the air inside the mill of paddy dust.
142	*Oil refinery.*—The factory employs about 1,200 adult males; no women, or children under 14, are employed. The hours of work for continuous processes are 12 hours each for two shifts, commencing at 6 A.M. and 6 P.M. respectively. The hours are from 6 A.M. to 10 A.M., and from 11-30 A.M. to 5-30 P.M., in the other departments. In the departments where 12 hours' shifts are in force, the number of men is about 20 *per cent.* in excess of what is required at any one time; this permits of the men being allowed to go in turns for their meals at times which they arrange among themselves.

Serial no. of factory.	Notes.
143	*Saw mill.*—The mill employs 120 men, no women or children are employed. The hours are from 6 to 10-30 A.M., and from 12 to 5-30 P.M. There is no work at night. The pay of the ordinary hands is from Rs. 13 to Rs. 16 a month.
144	*Oil refinery.*—The factory employs about 4,400 adult males, 100 women, and 100 half-timers. The hours of work are as in no. 142. The women are employed in making paper boxes for candles; they are all Burmese, and are engaged by a contractor and paid by piece-work. They earn from Rs. 14 to Rs. 20 a month each; some young girls not more than 13 or 14 years of age were found earning Rs. 14 each. Six of the total number gave their ages as under 14 years. The half-timers are employed in packing candles; their present hours of work are from 7 A.M. to 10 A.M. and from 1 P.M. to 5 P.M. Those questioned stated that these hours have been in force only for a month or so, and that, previous to that, they always worked the full hours of the adults. Their statement was confirmed by some of the adults working in the same department. The half-timers are paid Rs. 8 a month each, and the same wage is paid to some of the adults who work full hours in the same department. Twenty-seven of the smallest of the half-timers were examined; 10 of them appeared to be under 9 years, and of these 10 six were physically unfit for work. It is stated that difficulty is experienced in getting a sufficient number of half-timers for the work. The physique of the work people is generally good, and the arrangements throughout the work excellent.
145	*Rice mill.*—The mill is owned and managed by a Burman; it employs 16 hands in the milling department, 8 in the engine room, 50 in carrying paddy from the boats to the mill (these include 20 Burmese—6 men and 14 women above 16 years) and 20 carrying rice to the boats, the latter are Coringis, earning not less than one rupee a day. The hours of work are from 6 A.M. to 6 P.M., for about five months in the year, and the mill is shut down for the rest of the year. There is no general stoppage for meals, but the hands are allowed to go out for a short time, as they can be spared. The mill works, for perhaps 20 days at the height of the season, all night by lamp light, a separate shift of men being engaged. The carrying coolies are engaged by a contractor at irregular times, as boats arrive with paddy; they change about in gangs from mill to mill as work offers. Fencing of machinery is somewhat deficient.
146	*Rice mill.*—About 40 hands are employed inside the mill. Conditions are generally the same as in no. 145.
147	*Rice mill.*—The mill employs about 100 adult males (in 2 shifts of 50 each) in the milling department; and, at the busiest time of year, about 1,000 "outside" coolies supplied by a contractor. These coolies are employed for the following purposes:—6[illegible]0 for carrying paddy from the boats to the godown; 150 in carrying paddy to hoppers; 32 in sewing bags; 60 in filling and weighing bags of rice; 140 in carrying bags to the boats. The hours of work are as in the previous two mills. The milling coolies get about 1½ hours off in the 12; this is rendered possible by engaging about 20 *per cent.* more hands than are actually required at any one time for the milling. The practice in Rangoon is to consider this provision of extra hands as equivalent to a shift, and not to stop the mill for half an hour between 12 and 2 P.M., as required by the Act. In none of the Rangoon rice mills is there even a midday stoppage. The mill stops at 1 P.M. on Saturdays. The cleaning of machinery is done on Saturday afternoon, and the mill starts again on Monday morning. Some women are employed carrying paddy from the boats to the godowns; the manager says there would be no objection to a prohibition of night work for women, because the contractors could easily get a few extra men to take their places in the night shifts. Drinking water has to be brought by boat from Rangoon. The fencing of machinery is insufficient, and no fans have been put in for clearing the air in the mill.
148	*Rice mill.*—This is a smaller mill owned and managed by a Burman. The hours of work and the general arrangements are much the same as in the previous three mills. Some women were noticed carrying paddy from the boats to the godown; they work the same hours and earn the same wages as the men. No children under 14 years were seen, but there were a few between 14 and 16. These are said not to work the full 12 hours; they go on till they get tired, and earn Rs. 2 to Rs. 3 a week. The arrangement here among the carrying coolies is to work in turns for 6 hours only at a time, *e.g.*, one set works from 6 A.M. to noon, and again from 6 P.M. to midnight. The fencing is insufficient.
149	*Rice mill.*—The mill is owned and managed by a Chinaman. It employs 80 mill hands in two shifts of 40 each and 250 outside coolies. It works day and night for three months of the year with two shifts; from 6 A.M. to 9 P.M., with one shift, for about a month; and from 6 A.M. to 6 P.M. for the rest of the year. Fencing is insufficient.

MADRAS TOWN.

Serial no. of factory.	Notes.
150	*Cotton spinning.*—The mill employs 649 men, 132 women and 285 half-timers. It works daylight hours only, varying from 11½ hours actual working in December (6 A.M. to 6 P.M.) to 13 hours in June (5-30 A.M. to 7 P.M.), an interval being always given from noon to 12-30 P.M. Half-timers work in forenoon and afternoon shifts, but the forenoon shift boys are called back after the mid-day interval, and not allowed to leave till 2 or 3 P.M. Examined 105 half-timers out of the morning shifts of about 120; of these 25 seemed to be under 9 years, though 20 of them held certificates to show they were over 9; the other 5 had not been sent for examination by the certifying surgeon. The registers of half-timers had not been filled in for three days, and the form of register did not show the morning and afternoon shifts separately, so that it was quite impossible to check the hours actually worked by any half-timer. Of the hands working full-time on the ring-frames, 28 of the youngest boys were picked out and examined. Of these 24 appeared to be under 14 years, and an examination of the certificates of 4 of these showed them to be aged 9, 10, 11 and 13 years, respectively, on the date of the visit. It was evident that a number of boys certified as under 14 years were being worked full time. Excluding doffing boys, more than half the hands in the spinning department were quite young boys, and a 'young person' class would certainly determine working hours here. Women are employed in all departments; they are said to get one hour's interval at noon, and to take the other half hour prescribed by law at different times, when they can be spared. Wages run from Rs. 2-8-0 to Rs. 3-8-0 a month for half-timers, from Rs. 4-0-0 to Rs. 5-8-0 for full-time boys, and from Rs. 6-0-0 to Rs. 11-0-0 for men. The latrines are long, open trenches, without separate seats. There is a complaint that when a batch of half-timers is sent to the certifying surgeon for examination, some are sometimes sent back unexamined for want of time, and that much trouble is thus caused to the management. Weighed 18 men—average weight 98½ lbs. The half-timer and full-timer boys seemed a very thin, weakly lot. To make a fair comparison with children outside the mill, an adjacent vernacular school was visited, and 186 children in it, not working in mills, and of ages from 6 to 14 years, were examined. Compared with these school children, the mill children seemed to be of somewhat poorer physique, and underfed. The mill spins counts ranging from 10*s.* to 40*s.*; the cotton comes from the Tinnevelly, Dhárwár, and Broach districts.
151	*Cotton spinning.*—The mill employs about 500 men, 75 women (chiefly on reeling and waste) and 100 half-timers. It works daylight hours only, with an interval from noon to 12-30 P.M. Conditions as to half-timers and wages are very similar to those in no. 150. Three small boys admittedly working full-time and earning Rs. 4 a month were picked out and their cases inquired into; two of them were certified as 10 and 12 years, respectively, on date of the visit; the other had not been certified, but was apparently about 12 years of age. Piece-workers in the reeling department earn from Rs. 4-8-0 to Rs. 8 a month. The certificates of half-timers in many cases show only that the boy is between 9 and 14 years; his exact age is not given. The same complaint is made that many half-timers are sent back unexamined by the certifying surgeon. The latrines are on the dry-earth system with no separate seats. Weighed 10 men—average 97½ lbs.
152	*Iron works.*—The factory employs 196 men only. The working hours are from 7 A.M. to 5 P.M., with one hour's interval at noon, except on Saturday, when work closes at 4 P.M. Overtime is sometimes worked till 6 P.M., but never later. The wages range from 2 annas to Rs. 2 a day. The manager states that during the 9 hours' day, the men do not actually work for more than about 7½ hours.
153	*Printing press.*—The press employs only full-time males; no women or half-timers are employed. Boys are not engaged unless they are certified to be over 14 years. Two of the smallest boys were examined and seemed to be under 14 years; they had not been certified, but had horoscopes to prove their age to be over 14 years. The ordinary working hours are from 9 A.M. to 5-30 P.M., with an hour's interval at noon. Overtime up to 2 or 3 hours is often worked, and on rare occasion (4 or 5 times a year for 2 or 3 days at a time) some of the men have to work from 7 A.M. to 4 A.M. the following morning, with only 2 intervals of an hour at mid-day and 1/4 hour in the evening. Ventilation good.
154	*Portland cement works.*—The factory employs 302 men, 39 women and 11 half-timers. The hours of work for the ordinary workers are from 7 A.M. to 5-30 P.M., with one hour's interval at noon, except on Saturday, when work is from 7 A.M. to 1-30 P.M. The 33 men employed on the continuous process work in 8 hours shifts, each of 11 men, the first shift from 6 A.M. to 2 P.M., the second from 2 P.M. to 10 P.M., and the third from 10 P.M. to 6 A.M. They get no Sunday or other holidays. The men in the night shift change into one of the day shifts every Saturday. The women and children work by day-light only, on out-door work. All workers are paid on the

Serial no. of factory.	Notes.
	10th of the month for the preceding month. The upper chamber was very dirty, and needs a fan; the fencing of machinery was deficient in some places.
155	*Cotton spinning and weaving.*—The mill employs about 3,400 men, 80 women (on building work only) and 900 half-timers, total 4,380 hands. The working hours are from 6-30 A.M. to 6 P.M. from the 1st January to the 15th March; from 6 A.M. to 6 P.M. from the 16th March to the 30th September; from 6 A.M. to 5-30 P.M. from the 1st October to the 15th December; and from 6-15 A.M. to 5-45 P.M. from the 16th December to the 31st December, always with an interval from noon to 12-30 P.M. Sunday is invariably given as a holiday; and besides Sundays, 6 other days were given in 1907, and $7\frac{1}{2}$ days are notified for 1908. The engine stops at 5 P.M. on the afternoon preceding each holiday, including Sundays, to permit of machinery being cleaned. The half-timers work in two shifts, one from the start till noon, the other from 12-30 P.M. till the finish. No women are employed inside the factory, the difficulty of arranging for the prescribed rest of $1\frac{1}{2}$ hours without disturbing the working of the mill having, among other causes, led the management to replace all women workers by men. By the courtesy of the manager, all the half-timers of the one shift, 357 in number, were mustered outside for inspection by the Commission; 26 of the smallest were picked out as apparently under 9 years of age, but all were found to have been duly certified by the surgeon as over 9. The full-timer boys all seemed to be over 14. The children were a healthier and better fed lot than those seen in mills nos. 150 and 151. Weighed 14 men in carding department—average 101 lbs. ,, 7 ,, beaming ,, ,, 104 ,, ,, 20 ,, weaving ,, ,, 98 ,, The average of 41 was 100 lbs. In spite of comparatively short working hours, about 10 *per cent.* of the hands are absent every day, and the mill has to entertain that number of extra hands to provide for such casual absences. There is one man to each loom (about 800 in all), except in the case of 50 small 26″ looms, two of which are given to one man. Weavers earn from Rs. 12 to Rs. 14 a month. The manager finds that this arrangement is economical, and he can get the necessary number of hands. The manager finds a great improvement in the skill and application of the workers generally during the last 15 years. Ventilation, sanitation and arrangements generally are excellent. The discipline of the workers struck the Commission as being specially good, there being little or no loitering about. The mid-day interval is used by practically all the workers for eating their dinner, there being no eating of meals at odd times during working hours, as in Bombay, etc.
156	*Cotton spinning and weaving.*—The mill employs about 3,300 men, 300 women, and 930 half-timers, total 4,530 hands. The mill is under the same management as no. 155 and the hours of work, conditions of labour, wages, etc., are the same as there. Some of the half-timers certified as over 9 years hardly looked that age; 2 of the smallest were specially examined and found to be not more than 8, though certified as over 9.
157	*Electric power station.*—28 men working in shifts, and 180 men in the workshops, are employed. The 28 men work in 2 shifts of 14 men each—one shift works from 3 P.M. to 10-30 P.M., and again next morning from 5 A.M. to 3 P.M., and then has 24 hours off duty, during which the second shift works the same hours. The object of this arrangement is that the change of hands may be made while the machinery is running, so that responsibility for anything wrong may be easily fixed. The men are said to like the arrangement. The machinery does not run from 10-30 P.M. to 5 A.M. The ordinary hands on shifts earn from Rs. 10 to Rs. 15 a month; they get no Sundays or other holidays. The workshop hands work from 7 A.M. to noon, and from 1 P.M. to 5 P.M. Only adult males are employed.
158	*Railway workshops.*—The shops employ about 6,000 adult males—no women or half-timers are employed. The working hours are from 7 A.M. to 4-30 P.M. with one hour's interval at 11-30 A.M.; on Saturday the hours are from 7 A.M. to 12 noon. Overtime is sometimes worked from 6 A.M. to 7 A.M. and after 4-30 P.M. for an hour or two, but very rarely after 8 P.M., and then only for a few men. There used to be a considerable amount of working on Sundays, without any compensating holiday being given in the week, but this is said to have been stopped since the works were extended 8 months ago. There is no scarcity of labour; unskilled hands get 4 annas and artisans from 6 to 12 annas a day, but 10 *per cent.* of the best hands in each shop get extra rates up to one rupee a day. All apprentices are certified to be over 14 years before admission. The men are paid on the 12th of each month; work then stops at noon, and the men work instead a full day the following Saturday, when the 12th is not a Saturday. Piece-work rates are arranged so that no man earns more

MADRAS TOWN—*concluded.*

Serial no. of factory.	Notes.
	than 25 *per cent.* more than what he could get as a daily worker; the average is about 15 *per cent.* more. The hands are mostly Tamils, they are not a robust lot, and are said to be 20 *per cent.* less efficient than workers in the Bombay railway workshops, but they are physically fitter than the same class employed in the Madras cotton mills. In the year 1907, the percentage of absentees was as follows:—mechanics, 8·71 *per cent.*; coolies, 14·43 *per cent.*; general average 10·28 *per cent.*
159	*Aluminium works.*—The works employ about 250 men and 15 half-timers; the men work from 7-30 A.M. to 5-30 P.M., and the half-timers from 9 A.M. to 4 P.M., with one hour's interval at noon.

MADRAS PRESIDENCY.

Serial no. of factory.	Notes.
160	*Sugar refining.*—The refinery employs, when working, about 150 hands. The hours for day workers are from 6-30 A.M. to noon, and from 1 P.M. to 6 P.M.; women (only 8 in number) work from 8 to 12 noon, and from 2 to 5 P.M. The men engaged on continuous processes are divided into 2 shifts, 24 men in each, with the following hours—day shifts from 8 A.M. to 1 P.M., and from 8 P.M. to 1 A.M. (10 hours). Night shift from 1 A.M to 8 A.M. and from 1 P.M. to 8 P.M. (14 hours). There are no fixed intervals of rest, and the shifts change weekly. Day-workers get from Rs. 5 to Rs. 10 a month, shift men Rs. 7 to Rs. 10, and vacuum pan men Rs. 20 to Rs. 27. No children are employed.
161	*Cotton spinning.*—The mill employs about 550 men, 200 women, and 225 half-timers. It works by daylight only, with half an hour's interval from noon to 12-30 P.M., the longest day being from 5-45 A.M. to 6-45 P.M., and the shortest from 6 A.M. to 6-10 P.M. The workers leave their work to eat food from about 8 A.M. onwards, and the manager estimates that they are away from their work for about 1½ hours a day, exclusive of the mid-day interval. To permit of this, about 15 *per cent.* extra hands are entertained. Women are employed chiefly on reeling; they come to work about 7 A.M. and leave about 5-30 P.M. They have no regular interval except the mid-day half-hour, but go out frequently at other times. All hands are called to clean machinery for 2 hours on Sunday morning. The half-timers are supposed to work in forenoon and afternoon sets, but there is reason to think that in practice most of them work the whole day. The adult workers were a healthy, well-nourished lot; 18 men averaged 106 lbs. The half-timers, though active and healthy-looking, were the smallest lot that the Commission has yet seen; of 42 who were paraded for inspection about half the number seemed to be under 9 years, and some were noticed at work in the mill who could not have been over 6 years, yet all whose certificates were called for had been certified to be over 9 years. The certification is done by the local apothecary, and is checked by the Civil Surgeon of the district whose head-quarters are 28 miles distant, on the occasions of his quarterly inspection of the mill. It was stated to the Commission that the Civil Surgeon had never rejected on account of age any child passed by the apothecary. A fresh certificate of age is obtained before a half-timer is promoted to full-time, but as stated above most of the half-timers actually work full time. There are a considerable number of workers between the ages of 14 and 16 years; the manager would not object to the hours of such boys being restricted to 12. The workers come from adjacent villages, within a radius of one mile, and there is no scarcity of labour, though the Ceylon tea and rubber estates attract many coolies from this part. The attendance of the hands has been more regular since the prices of food have gone up during the last 2 years; cheap food used to result in irregular attendance. Monthly wages are as follows—half-timers Rs. 2-8-0, full-timer boys Rs. 3-8-0, boys from 14 to 16 years Rs. 4 to Rs. 5, adult males Rs. 7-8-0 to Rs. 9. Women earn Rs. 6 to Rs. 7 on reeling. In addition to these wages 3 pies a day is given to each worker for punctual attendance, and a bonus of from Rs. 1-8-0 to Rs. 3 a month if the outturn of the mill is satisfactory. Fencing and ventilation were good.
162	*Cotton spinning and weaving.*—The mill employs 325 men, 124 women and 98 half-timers. It works by daylight only, with an interval from 12 to 12-30 P.M. The mill never starts earlier than 6 A.M., or stops later than 6-45 P.M. The women are said to be given an interval from 11-45 A.M. to 1-15 P.M. When the half-timers were mustered, it was found that 79 were present and working out of a total of 98 on the roll, and the manager had to admit that the half timers really work the whole day, the only difference between them and the full-timers being that the latter, being somewhat older, get higher pay. The certification of ages seems to be fairly accurately done, though there were some doubtful cases; the certification is done by the apothecary in charge of an hospital 13 miles distant. He comes to the mill when not less than 10 children are ready for examination, and his work is checked once a quarter by the Civil Surgeon of the head-quarters station, who sometimes rejects

Serial no. of factory.	Notes.
162—*contd.*	children certified by the apothecary. The physique of the workers varied considerably, some of the children were small and weedy. 16 men averaged 107 lbs. The women were a strong and healthy lot. Men earn from Rs. 7 to Rs. 8 a month, women from Rs. 5 to Rs. 8, and "half-timers" Rs. 3 to Rs. 3½. All hands, except "half-timers," are called to clean machinery on the Sunday holiday, from 7 to 10 A.M. Wages are paid monthly, about the 15th. Fencing good, ventilation fair. There is a small ginning factory attached to the mill, which works by day-light only from March till October. For the 6 double and 6 single gins 20 women are employed, at 2 to 2½ annas a day. The line shaft is well protected by a masonry wall.
163	*Cotton ginning.*—The factory works day and night from early in March till the end of May, then by day only till the end of September. The day shift works from 6 A.M. to 6 P.M., with a stoppage of the engine for half an hour at noon; and the night shift works from 6 P.M. to 6 A.M., with a stoppage of the engine for half an hour at midnight. A shift consists of 40 women for the 32 gins. The rate of pay is from 2½ to 3 annas for day or night work. The manager stated that if the employment of women at night were prohibited, night work would become impossible. The other workers were 28 women and boys for carrying cotton to and from the gins, and 80 men for handling the bales, etc. The gins are fed by hoppers, and all the women at the gins have to do is to keep the rollers clear; the seed is carried outside to either end of the factory by mechanical conveyors which deliver direct into bags. The line shaft is over-head. The factory was unusually free from dust and fluff. The openers are fitted with cane spikes, and being outside the factory are not dangerous.
164	*Cotton ginning.*—Conditions are very similar to those described in no. 163. For 32 double gins 36 women are entertained. The day shift works from 6-30 A.M. to 6-30 P.M., and the night shift from 6-45 P.M. to 6-15 A.M. There is apparently no proper interval of rest at noon, as the engine is stopped only at 6-15 A.M. and 6-30 P.M. for oiling.
165	*Cotton ginning and pressing.*—The factory works for most of the year, and by day and night for about 6 months. There were at work, on the day of the visit, 53 men and 39 women in the ginning, and 58 men and 24 women in the pressing, factory. The workers all looked wellfed and healthy. Day and night shifts are relieved at 6-30 P.M. and 6-30 A.M., respectively, and there is no stoppage of the engine except for oiling. There are no fixed intervals of rest. Women are paid 2½ annas, and men 5 annas, a day.
166	*Cotton spinning.*—The mill employs 974 men, 318 women and 472 half-timers on 36,350 ring spindles. It works by day-light only, the longest day being from 6 A.M. to 6-30 P.M. and the shortest from 6 A.M. to 6 P.M. with a stoppage from noon till 12-30 P.M. The workers here are said to take a light meal before coming to work in the morning, another during the midday interval, and their principal meal at night. The women come to work between 6-30 A.M. and 7-30 A.M. and go about 5-45 P.M. Besides the midday stoppage, they have no fixed intervals of rest, but go out as they like during the day. They are all employed as piece-work reelers. 33 infants and 26 other non-working children were counted inside the reeling room. A young persons class (age 14 to 16) would control the hours of the whole mill, and would not be opposed if the hours were fixed at 12. The employment of children here seems to be strictly in accordance with the Act, the certifying of ages is well done, and the half-timers work in forenoon and afternoon sets. Each child wears a tin disc on which is stamped his serial number and a letter indicating the department in which he is employed, and his certificate number. The children are sent to the hospital, half a mile distant, to be certified. The workers are allowed to go outside during the day as they wish, but any one remaining outside more than 20 minutes at a time is fined. The manager thinks that these casual absences do not exceed one hour a day. Attendance seems to be regular, the number of absentees on the day of visit represented only 3 *per cent.* of the total number. The company has provided 140 houses, at a monthly rent of 12 annas each, for workers. Half-timers get Rs. 2 a month *plus* 8 annas for dearness of food; when advanced to full time work they get Rs. 4-8-0, and are eligible for the monthly bonus on outturn. Three pies is paid in cash daily for punctual attendance to each worker in the spinning department as he arrives. Men earn from Rs. 7 to Rs. 8 a month, and women from Rs. 5 to Rs. 6, and a monthly bonus is paid on the outturn—it sometimes amounts to 1½ annas a day in the case of rovers. Wages are paid monthly on the 12th, but the women are paid every 10 days; all hands except half-timers come to clean machinery on the morning of the Sunday holiday. The workers as a body seemed healthy and well-nourished, there were no signs of skin disease. The average weight of 21 men was 108 lbs.

MADRAS PRESIDENCY—SHOLAPUR.

Serial no. of factory.	Notes.
167	*Railway workshops.*—The shops employ 322 men; there are no half-timers or women. They work from 7 A.M. to 5 P.M., with an interval from 11-20 A.M. to 12-40 P.M.; on Saturday work stops at 11-20 A.M. Work after 5 P.M. is paid for as overtime, the rate being $1\frac{1}{2}$ times that for day work. Discipline is strictly enforced during working hours: if a worker remains absent 3 days without leave he is dismissed. About 120 additional men are employed inside the works by contractors; these are not controlled by the works manager. Blacksmiths get from 5 annas to one rupee a day, fitters one rupee, and coolies 4 to $4\frac{1}{2}$ annas. Skilled labour is rather scarce.

SHOLAPUR.

Serial no. of factory.	Notes.
168	*Cotton spinning and weaving.*—The mill employs 1,453 men, 661 women, and 182 half-timers—total 2,296 hands for 45,700 spindles (ring) and 526 looms. The working hours are from day-light to 7-30 P.M., with half an hour's interval at noon; this makes about $12\frac{1}{4}$ hours' actual work in the shortest, and $13\frac{1}{2}$ hours in the longest day. Some years back, about 1898, the mill worked from 5 A.M. to 8 P.M., for a short time. The half-timers work in forenoon and afternoon shifts—from start to noon and from 12-30 P.M. to 7-30 P.M.—but no *fixed* intervals of rest are given. By the courtesy of the agents the mill was stopped for an hour on the occasion of the Commission's visit, and all the male workers in the spinning department were mustered outside for inspection. There were 606 male adults over 17 years, 186 youths between 14 and 17 years, and 92 half-timers. The physique of all seemed to be very good; and there were no signs of scrofula or other constitutional disease. The certification of age of half-timers seemed to have been done carefully, as only 6 of those working full-time might have been under 14 years and of the half-timers only 4 seemed to be under 9 years; of these four, 3 had been certified to be over 9 years. Though the youths between 14 and 17 constituted 23 *per cent.* of the full-time hands in the spinning department, the manager explained that restricted hours for a 'young person' class would not necessarily restrict the hours of the whole mill, because he could keep the adults more closely to their work after the hour for the young persons leaving the mill, if he allowed them more liberty before that hour. He could thus keep the spinning going; it only required careful organization, and could be done. At present many more hands are employed than were required on the machinery at any one time. The manager estimates that out of the 12 hours for which the machinery ran each of the hands worked actually only 9, and they could never do more than this, however much the running hours were extended. Wages are Rs. 2-4-0 a month for half-timers, and Rs. 4-8-0 for full-time boys; spinners (rings and mules) earn from Rs. 10 to Rs. 12 a month, and weavers (one loom) from Rs. 13 to Rs. 14; a few weavers who have two looms earn more. Reeling is done by women, who work from 6 A.M. to dark, with two hours off at noon; they earn from Rs. 4 to Rs. 8 a month. Fencing is good. The latrines have 52 seats. Ventilation is deficient, but improvements are being made.
169	*Cotton spinning.*—The mill employs 1,212 men, 576 women and 302 half-timers, of whom 67 are girls—total 2,090 hands. The working hours are from day-light to 7-30 P.M. Some years back work went on sometimes till 9 P.M., and more often till 8 P.M.; the manager states that at the request of the hands the closing time was altered to 7-30 P.M. ten months ago. The Commission visited the factory from 6-30 P.M. to 7-30 P.M.; the atmosphere inside the mill was foul and oppressive, due to imperfect ventilation, though fans were running, and to humidifying by means of steam. The hands were inspected as they left the mill at 7-30 P.M., and did not look exhausted. The staircases are narrow, and dangerous in case of fire.
170	*Cotton spinning and weaving.*—The mill employs 1,594 men, 692 women and 152 half-timers—total 2,438 hands for 45,552 spindles (ring) and 511 looms. The working hours throughout the year are from 6 A.M. to 7-30 P.M. (standard time, which is half an hour in advance of sun time), with one half hour's interval at noon, electric light being used both at the start and finish. The women in the reeling department come about 8 A.M., get an interval from 12 noon to 1-30 P.M. and work on till 8 P.M. Half-timers are employed in morning and afternoon shifts, alternating every month, A shift working from the start to noon, and B shift from 12-30 to 7-30 P.M. without any fixed intervals for rest. Most of the half-timers attend a school on the mill premises—B set from 10 A.M. to noon, and A set from 12-30 P.M. to 3 P.M. The half-timers all wear their certificate in a small tin box round the neck, and no objection is raised to this. The certificate is drawn up in triplicate—one copy remains on the surgeon's file, one is kept by the mill, and one is given to the child. The half-timers are certified by the surgeon as between 8 and 10 years, not as "over 9 years;" a few were observed who seemed to be under 9, but all were physically fit, and the operatives generally a fine, healthy lot. A weekly bonus for regular attendance is given in the spinning department only; the returns for the week showed that 612 out of 792 hands, *i. e.*, 77 *per cent.*, earned it by being present every working day. Fencing and ventilation good; the latrines have 60 seats.

CENTRAL PROVINCES.

Serial no. of factory.	Notes.
171	*Cotton spinning and weaving.*—The mill employs 199 men, 73 women, and 68 half-timers—total 340 hands. It works day-light hours only, with half an hour's interval at noon. Half-timers work in 2 shifts, from the start to noon, and from 12-30 P.M. to closing time. Machinery is cleaned once every fortnight from 12-30 P.M. to 2-30 P.M. Examined 21 half-timers; of these 6 seemed to be under 9 years, though certified as over that age. The certificates do not contain any marks of identification. Wages are paid weekly, every Saturday afternoon. The workers were a good lot physically. Fencing and ventilation good.
172	*Cotton ginning and pressing.*—The machinery is all very well fenced, the line shaft being walled in. The opener delivers on to a traveller which prevents danger to hands working in front of it. The ginning factory works day and night, with two shifts, in a busy season; at the time of the Commission's visit it was working by day only. The gins are tended by women, who are paid $3\frac{1}{2}$ annas for day work and $3\frac{3}{4}$ annas for night work. The manager says it would be impossible to get men to tend the gins at night.
173	*Cotton ginning.*—The conditions of labour are the same as in no. 172. Fencing excellent
174	*Cotton ginning and pressing.*—The conditions of labour are the same as in no. 172. Only men were working in front of the opener. Fencing excellent.
175	*Cotton spinning and weaving.*—The mill employs 730 men, 135 women and 119 half-timers (85 boys and 34 girls)—total 984 hands. The working hours are from day-light to dark, the shortest hours being from 6-30 A.M. to 6 P.M. in December, and the longest from 5-20 A.M. to 7-12 P.M. in June, *i. e.*, excluding the half-hour interval at noon, 11 hours and 13 hours 22 minutes, respectively, actual working time. Electric light is installed only in some dark parts of the spinning department. The weekly holiday is always given on Monday, the local market day, instead of on Sunday. This is preferred by the hands, as they can buy their weekly supplies of grain, etc., cheapest on Mondays. The cleaning of machinery is done once a fortnight, on the morning after the weekly holiday; the ordinary hands are never called on holidays to clean machinery. The half-timers work in two shifts—A shift from the start to 9-30 A.M., and from 4 P.M. to the close, and B shift from 9 A.M. to noon, and from 12-30 to 4. Both shifts are at work together from 9 to 9-30 A.M. Examined 113 half-timers of both shifts; all were certified as over 9 years, but about a dozen of them seemed to be under 9 years. They were a poor lot. Twenty of the smallest of the full-timers were picked out and examined; of these, 13 were obviously only about 12 years old, though the certificates originally given them as half-timers showed one of them to be 14 years, two to be 15, five to be 16, four to be 17, and one to be 18 on the date of the Commission's visit. The certification of ages seems to have been carelessly done some years ago; it is better now. One of these boys named Abdul Salam, who seemed about 12 years old but had been at work for four years, was very weak; his health seemed to have been affected by the work. The adults seemed a strong enough lot. Weighed 10 spinners—average 100 lbs., and 10 weavers—average 113 lbs. Wages are paid monthly, about the 25th, for the previous month. There is a scarcity of labour, and wages are said to run rather higher than at Nagpur, especially those of women and children. Fencing and ventilation good. Good accommodation at a monthly rent of 12 annas a room is provided on the premises for a number of the hands.
176	*Cotton ginning and pressing.*—The atmosphere in the press-room was thick with fluff from the 'opener'; there was no fan or other means of clearing the air, and work in the room must be most injurious to health. On the 25th October 1905 a man was burnt to death at this press in an accidental fire which occurred in front of the 'opener'; there must always be great danger of such accidents under the present conditions of working. The charge for pressing one bale of 400 lbs. is Rs. 3-8-0; of this $3\frac{1}{4}$ annas a bale is paid to the contractor, who supplies the labour, and he pays the men working the press; they receive from 6 to 9 annas a day for a good day's work. There is never any night working.
177	*Cotton pressing.*—This press was better ventilated than the last, but the atmosphere can never be wholesome where an 'opener' is used, and there must always be great danger of fire.

CENTRAL PROVINCES—*continued.*

Serial no. of factory	Notes.

178 *Cotton ginning and pressing.*—In the ginning factory there are 44 gins; the number of hands employed is 45 men and 70 women (or double their number when working day and night). The working hours are from 6 A.M. to 6 P.M., with half an hour's stoppage at noon; the night shift, when engaged, work from 6 P.M. to 6 A.M., with half an hour's stoppage at midnight. The following table shows the number of days worked in the last four years:—

Year.	Month.	Number of the days the factory worked. With day shift only up to 6 P.M.	With day shift only up to 9 or 10 P.M.	Day and night with double shifts.	Total.
1904-1905 ...	November	15	......	8	23
	December	12	......	7	19
	January	22	2	......	24
	February	1	1	18	20
	March	15	......	1	16
	April	13	3	......	16
	May	12	6	......	18
	June	4	......	......	4
		94	12	34	140
1905-1906 ...	November	14	......	1	15
	December	4	......	19	23
	January	16	4	2	22
	February	14	2	......	16
	March	17	2	......	19
	April	*Nil.*	......	......	*Nil.*
	May	16	......	......	16
		81	8	22	111
1906-1907 ...	November	13	4	......	17
	December	1	1	17	19
	January	2	......	22	24
	February	1	1	6	8
	March	23	......	2	25
	April	16	......	......	16
	May	20	......	......	20
	June	4	......	......	4
		80	6	47	133
1907-1908 ...	November	13	......	3	16
	December	1	......	21	22
	January	......	......	24	24
	February	13	......	4	17
		27	......	52	79

To tend the 44 gins, 56 women are employed, *i. e.*, one for each gin *plus* 12 extra hands to relieve the others, so that each woman may get at least 1½ hours' rest; in addition, 14 women are employed for removing cotton seed, sweeping, etc. No children are employed, but the manager states that women sometimes leave their children to tend the gins when they go out. Women are paid 3 to 3½ annas for day work, and 3½ to 4 annas for night work; men get from 7 to 10 annas a day. All hands are engaged and paid by a contractor. The manager says that if women are not allowed to work at night, there will be difficulty in getting men to take their places, and in any case the men will cost twice as much. The ginning factories in this district close on Sunday, which is also the local bázár day. The press works only by day; it has to work on Sundays occasionally to fulfil urgent contracts, but it always gives a holiday on some other day instead. The manager does not object to a weekly holiday in either the ginning or pressing factory.

179 *Oil mill.*—The mill is not under the Factory Act; it has four presses employing 18 men by day and 18 by night, the shifts being relieved at 6 A.M. to 6 P.M. respectively. There is no interval of rest, but the manager explains that for each pair of presses 4 men only are required, while 5 are actually engaged, so as to give each man a certain amount of relief. Pay is 5 annas a day. Work stops from 6 A.M. on Sunday to 6 A.M. on Monday, but all hands come to clean machinery from 6 A.M. to 4 P.M. on Sundays. Men on the day shift go on the night shift next week, and *vice versâ.*

Serial No. of factory.	Notes.
180	*Cotton ginning.*—The gin works either 24 hours, with two shifts, or 12 hours without regular reliefs. There is no intermediate system of 14 or 15 hours. An interval of $1\frac{1}{2}$ hours is given both to the day and night shifts, the engine being actually stopped for this time. For the 18 gins 18 women, *plus* 3 for casual relief, constitute a shift. Women get 3 annas for day, and $3\frac{1}{2}$ annas for night, work. Fencing good.
181	*Cotton ginning.*—There are 12 gins, which employ only 36 persons, and the factory is therefore not under the Factory Act. It works only by daylight; the man-in-charge stated that there was an interval of half hour at noon, but the workers denied this. The line shaft was sufficiently fenced.
182	*Cotton spinning and weaving.*—The mill employs 700 men, 210 women, and 184 half-timers on 24,000 spindles (ring) and 160 looms. The hours of working for men, women and half-timers, and the conditions generally, are the same as in No. 183. It is explained that when the half-timers leave the mill in a body from 8-30 to 9 A.M., and from 3 to 3-30 P.M., the full-timers do the "doffing"; this arrangement, if carried out in practice, must interfere considerably with the working of the mill. The mill-hands eat their forenoon meal generally between 8 and 10 A.M., leaving their work for this purpose when they like. It has been found impossible to prevent this casual way of leaving work. Much loitering about the mill compound was observed on the occasion of the Commission's visit. The supply of labour has become much scarcer of late years, especially in the case of full-time and half-time boys. The adult workers, men and women, were an exceptionally sturdy, well-set-up lot. The children, as in No. 183, were rather a stunted poor lot; and under a system of certificates of physical fitness some of them would have been rejected. 98 half-timers were paraded for inspection, and were all found to have been duly certified for age. Of the full-timers 8 were picked out who were probably under 14 years, three of them not being over 12 years; weighed 25 men—average 102 lbs. Ten *per cent.* extra hands are stated to be employed in the carding and roving, and 25 *per cent.* in the spinning, departments. Three-fourths of the weavers run two looms each, and earn an average of Rs. 16 a month; those on one loom get only from Rs. 8 to Rs. 10. Ventilation is good, except in the carding room, which is also badly lighted. The certifying surgeon lives 26 miles off; formerly children used to be employed pending the grant of a sertificate; this is not allowed now, and they have to wait for the quarterly visit of the surgeon, or they are sometimes sent at the expense of the mill to the surgeon's station.
183	*Cotton spinning and weaving, also ginning.*—The mill employs about 640 men, 165 women and 110 half-timers; there are 14,688 spindles (ring) and 160 looms. Daylight hours on the longest working day in 1907 were from 5-25 A.M. to 7-20 P.M. on the 10th July (actual working hours 13 hours 25 minutes) and on the shortest from 6-25 A.M. to 5-55 P.M. on the 17th December (actual working hours 11 hours); the average over the whole year is 12 hours 3 minutes. There is an interval for the whole mill from noon to 12-30 P.M., and, besides, the half-timers and women get intervals of rest from 8-30 to 9 A.M. and from 3 to 3-30 P.M. Half-timers work in two sets, the first from the start to noon and the second from 12-30 P.M. to the finish. The weekly holiday is on Monday, the local market day. Forty-six half-timers were examined; they were all over 9 years, but were a poor, rather weakly lot. Of the full-time boys 13 were picked out who seemed to be under 14 years, though on the basis of their certificates they were all over that age, except one whose certificate showed him to be only 13 years. Half-timers get Rs. 3, and full-time boys Rs. 5 a month; to encourage them to be regular in attendance a bonus of 2 annas for a half-timer and 4 annas for a full-timer is given to every boy who is present every day of the week. In the month previous to the Commission's visit 220 out of a total of 300 boys earned the bonus (*i.e.* 73 *per cent.*). The women (all in the reeling department) earn from Rs. 5 to Rs. 8 a month. The manager thinks that the average number of absentees from work is only 7 *per cent.* Fencing and ventilation good; the latrines have 36 seats. The temperature of the preparation room at 8 A.M. was 95° Fahr. Cleaning of machinery is done every fortnight, on the afternoon preceding the holiday.
184	*Cotton spinning and weaving, also ginning.*—The mill employs about 700 men, 200 women, and 55 half-timers on 18,000 spindles (ring and mule) and 179 looms. It works by day-light only, with an interval of rest from 11-30 A.M. to 12 noon; the actual working hours of the longest day in June, and of the shortest day in December, are 13 hours and 5 minutes and 10 hours and 45 minutes respectively, the average over the whole year being 11 hours and 38 minutes. Half-timers work in two shifts; the first from the start to 11-30 A.M. with half an hour's interval from 9 to 9-30 A.M., the second from 12 to the finish, with an interval from 3 to 3-30 P.M. Women get three intervals of rest—9 to 9-30 A.M., 11-30 to noon, and 3 to 3-30 P.M. The weekly holiday is given on Monday, the local bazar day; when the mill works on Monday to make up for a special

Serial no. of factory.	Notes.
	holiday, the hands have to be allowed to leave at 3 P.M. to go to the bazar to buy their weekly supplies. Ninety *per cent.* of the operatives are *mahars* by caste; they are a well-fed, healthy-looking lot; weighed 44 men in the spinning department average 100 lbs., and 12 in the weaving department average 112 lbs. 24 half-timers were examined; all were over 9 and some appeared over 14 years; they were a strong healthy lot. No full-timers under 14 years were observed working full time. The certification of ages seems to be very carefully done, and no boy is allowed to work until certified. The Civil Surgeon visits the mill once every two or three months, and boys willing to work have to be kept waiting till he comes. Fencing and ventilation are excellent, and the arrangements generally are admirable. The mill is entirely under native management.
185	*Cotton spinning and weaving.*—The mill employs 2,983 men, 770 women and 732 half-timers (617 boys and 115 girls), a total of 4,485 hands on 76,000 ring-spindles and 1,214 looms. It works day-light hours only, varying from 13 hours 9 minutes in June to 10 hours 54 minutes in December, the average over the whole year being 12 hours 3 minutes, exclusive of the midday interval. The half-timers in the spinning department work in two sets, the first from the start to 9 A.M. and from 4 P.M. to the finish, and the second from 9 A.M. to 4 P.M. with the half hour's interval at noon, the sets changing every fortnight. The half-time girls are employed in the reeling department only, and they all work from 9 A.M. to 4-30 P.M. with the midday interval. A number of women are employed in the bleaching and dyeing departments, but the manager states that they cannot be got to work alongside the men in the spinning and weaving departments. Examined 124 half-time boys, they all seemed to be about or over 9 years, and certification had been carefully done, but the general physique was poor. Sixteen of the smallest full-timers were picked out of the spinning room; 8 of them seemed to be under 14 years, but on the basis of their original certificates as half-timers they would all be over 14 years. Promotion to full-time work here is based on the original certificates as half-timers; fresh certificates are not taken out. The men and women looked a healthy lot; 21 men from the carding department averaged 102 lbs. and 30 weavers averaged 103 lbs. each. Half the weavers tend two looms each, and half one only. There has been a scarcity of labour in recent years, especially in the spinning and weaving departments; attempts have been made to recruit gangs of men from up-country, but many of them cannot stand the noise in the mill, and leave after a day or two. An attempt was made to employ half-time girls in the spinning department, but they could not be induced to work with the boys. The mill is prevented from making further extensions owing to scarcity of hands. The latrines have 105 seats, some on the septic tank system. The arrangements for ventilation and cooling the air are excellent. Full particulars as to wages and other conditions prevailing in this mill are given in the printed evidence attached to the report.
186	*Cotton ginning and pressing.*—The Commission visited this factory to inspect the press house in which two women were burnt to death by a fire occurring in front of the cotton opener on the 22nd January 1908. It appears that 4 women were sitting on the cots in front of the opener, dusting cotton as it was shot out of the opener, when a spark from the opener set the whole room in a blaze; two of the women escaped, but the other two fell down among the cotton and were found dead a few minutes later, when the fire was extinguished, probably from shock as much as from burns. All the men who were working in the room escaped.
187	*Cotton spinning and weaving.*—The mill employs 575 men, 161 women and 309 half-timers (252 boys and 57 girls), a total of 1,045 on 16,500 spindles and 182 looms. It works daylight hours only, the same as in No. 185. Examined 102 half-time boys; of these 16 were certainly under 9 years, though they were all certified to be over that age. Besides these 16, there were 13 of the lot who seemed physically unfit and the boys as a whole were a thin, poorish lot. Examined also 29 half-time girls (3 from the spinning and 26 from the reeling department); all seemed over 9 years, and they were healthy and well nourished. The half-timers work in forenoon and afternoon sets, relieving each other at the midday interval; the forenoon set is said to get an interval of half an hour from 9 to 9-30 A.M., and the afternoon set from 3 to 3-30, the doffing work during these intervals being suspended, or carried on only so far as the full-timers can do it, resulting in a loss of production. It was stated by the half-timers that 5 of their numbers (whose names were ascertained) were *sáwaiwálas* (*lit.*, one-and-a-quarter, or extra, timers) and worked full-time for extra wages, though still kept on the list of half-timers; they also stated that this system was much more common some time ago. The management did not deny the fact. The full-time boys seemed a fair-sized lot; only 4 were observed who might have been under 14 years. There is said to be considerable scarcity of hands. The half-time girls in the reeling department get Rs. 2-14-0 a month, and this is deducted from the piecework earnings of the women whom they assist.

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188	*Cotton ginning and pressing.*—For 24 gins 29 women are employed, and the factory runs from 6 A.M. to as late as 9 P.M. with these hands; for all night running a separate shift of women is employed. A woman gets 3 to 3½ annas a day, and ¾ anna extra when work goes on up to 9 P. M. All the hands including women on the gins are employed and paid by a contractor, and no nominal lists are kept. The cotton opener in the press-house was of the usual dangerous type; only men were working in front of it.
189	*Flour mill.*—A small steam flour mill not under the Factory Act; it employs 9 men and 5 women, and works ordinarily by daylight only, but occasionally up to 9 P.M. and even all night, when the hands, who are not relieved, snatch such intervals for sleep as they can. The factory was clean and well arranged. Grain is ground on commission.
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190	*Flour mill.*—The mill employs 83 men; there are no women or children. It works ordinarily from 6 A.M. to 6 P.M.; sometimes work goes on till 9 P.M., and for about 40 or 50 days in a year the mill works day and night with double shifts. When working till 9 P.M. without relief the hands are paid overtime at the rate of ¼ day's wage for the 3 hours. Previously there was no midday stoppage, but about two months ago the stoppage of the mill from 12 to 12-30 P.M. was introduced. The number of men actually required at any one time for the inside milling work is 14, but 21 are always employed, so as to permit the men to leave their work for purposes of eating, drinking, etc. By the courtesy of the manager the mill was stopped, and all hands were mustered outside for inspection; the 21 inside hands were all of good physique, and showed no sign of lung ailments, except one case of bronchitis; the outside hands were a particularly fine lot of men. Arrangements for ventilation and clearing the air of dust in all compartments were excellent. The fencing was sufficient, except in the bagging department. The latrines have 5 seats.
191	*Cotton ginning.*—The season lasts from the beginning of November to the end of March, and the usual hours of working are from 6 A. M. to 8 P. M., with one hour's stoppage at noon. For the 36 gins only 40 women (with 3 overseers) are employed, so that each woman must work more than the 11 hours prescribed by law. The women are paid 2½ annas a day for 12 hours' and 3 annas a day for 13 hours' actual work. The fencing of the line shafts was sufficient; the cotton-opener is outside, and not dangerous.
192	*Iron workshop.*—72 men are employed who work ordinarily from 7 A. M. to 5 P. M., with one hour's interval at noon. Sugarcane presses are the chief article manufactured, and during the busy season, September to December, when the demand for presses is great, work goes on sometimes till 9 P. M. During these four months this factory has been exempted by notification from the obligation to stop work on Sundays. Daily wages range from 4 to 8 annas a man.
193	*Iron workshop.*—The shop employs about 40 men. The hours of work and the conditions of labour generally are the same as in No. 192, but there is no exemption in respect of the Sunday holiday.
94	*Cotton spinning.*—The mill employs 435 men, 46 women and 93 children—total 574 hands for 15,000 spindles (ring and mule). The working hours from October to March are from 6-30 A.M. to 9 P.M. with half an hour's stoppage at noon, *i. e.*, 14 hours' actual work; in April and May the hours are from 5-45 A.M. to 8 P.M.; in June from 5 A.M. to 7-20 P.M.; in July from 5-10 A.M. to 7-30 P.M.; in August from 5-30 A.M. to 7-15 P.M.; in September from 6 A.M. to 7 P.M.; and in October from 6 A.M. to 8 P.M.; always with the half hour's stoppage at noon. As a rule all the spinning mills here stop working by electric light in the hot weather. The manager estimates, by personal observation, that an average worker leaves his work for about 15 minutes every hour, often to take opium, ganja, etc., to which the hands here are much addicted. The manager admits that until a few months ago the Factory Act was not enforced at all; when he came to the mill about 9 months ago, all the children used to work full-time, irrespective of age. He states that he is trying to effect a gradual improvement in this respect, and that about 20 out of the 93 children now work only three-quarters of a day, the first set coming about 7 A.M. and staying till 5 P.M., and the second set coming from 12-30 P.M. till 9 P.M.; but the arrangements for relieving them are left entirely to the jobbers, and there are no clearly defined shifts. So-called half-timers get Rs. 3-2-0, and the other boys who work full-time Rs. 5-4-0, a month. The manager states that production *per* hour is better in the long working hours of the cold weather, because the hands stay inside more to keep themselves warm.

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195	*Biscuit factory.*—The factory employs 39 hands (all men) and works only from 7 A.M. to noon, and from 1 P.M. to 5 P.M.; there is no night work. The hands, who are all Hindus, earn from Rs. 7-8-0 to Rs. 12 a month.
196	*Flour mill.*—The mill employs 193 men only, and works as a rule day and night. The 96 men in the milling department are divided into two shifts of 43 each, each working 12 hours, and being relieved at 7 A.M. and 7 P.M. respectively. The mill stops from 6 A.M. Sunday to 6 A.M. Monday; but all hands attend to clean machinery on Sunday from 6 A.M. to 2 P.M. Wages run from Rs. 7-8-0 to Rs. 15 a month. Overtime is frequently worked, a full day's wage being given for any period over 4 hours, and half a day wage up to 4 hours. The pay register for the month of February 1908 showed that in the milling department men occasionally worked 36 hours at a sketch, when their reliever failed to turn up; the manager explained that on such occasions the men actually snatch a good deal of sleep during the night. The manager states that men suffer from asthma in the mill. The dust in the wheat receiving department was certainly very bad at the time of the Commission's visit, it being almost impossible to remain in the room; there would be no difficulty in clearing the air of all dust by exhaust fans.
197	*Cotton spinning and weaving.*—The mill employs 370 men, 30 women and 102 children (including 2 girls)—total 502 hands. The working hours are from 6 A.M. to 9-30 P.M. in the cold weather, and from 5 A.M. to 7-30 P.M. in the hot weather, with a stoppage of an hour from noon to 1 P.M. all the year round. The manager admits that until his arrival three months ago all the children in the mill worked full time, irrespective of age; since then a few of the youngest children have been put on half-time. The pay register of the month preceding the Commission's visit showed that 20 children were paid half-time wages that month. A large number of full-time boys, who were obviously under 14 years, were observed at work.
198	*Cotton spinning.*—The mill employs 499 men, 41 women and 53 children—total 593 hands. The working hours are from 5 A.M. to 7 P.M. from April to September, and from 6-15 A.M. to 9 P.M. from October to March, with a stoppage of half an hour at noon throughout the year. All the children admittedly work full-time, irrespective of age; 20 were picked out in the spinning department and examined, all were under 14 years, but over 9. There was apparently no certification for age until about 2 months ago, when a new manager was appointed; since then 2 lots of children were sent to the Civil Surgeon for certification, 10 on the 10th March and 14 on the 27th March 1908. All except one were certified as over 9, and under 14 years; but in spite of this they are still working full-time. The certificates contain thumb impressions, but no marks of identification. In the reeling department a number of young children, from 5 to 9 years of age, were observed; they were helping relatives on piece-work and are said to be learning the work. As soon as they have learned a little, they are permitted to work full-time, irrespective of age. Weighed 10 men—average 104 lbs. Average monthly wages and earnings are said to be, for children in the spinning department (all males), Rs. 4-8-0, spinners Rs. 15, piecers Rs. 10 to Rs. 12-8-0, reelers, men Rs. 9 to Rs. 12, women Rs. 7 to Rs. 9. The latrines have 12 seats; they are outside the mill compound, and are very dirty. Ventilation fair. The temperature in the spinning room at 4-30 P.M. on the 1st April was 100·5° Fahr.
199	*Cotton spinning and weaving.*—The mill employs 669 men, 58 women and 47 children—total 774 hands. The working hours are:— from 6-10 A.M. to 8 P.M., from October to March, and from 5-30 A.M. to 7 P.M., from April to September, with a stoppage from 12-10 P.M. to 12-55 P.M., all the year round. Sunday is invariably a holiday and in addition certain native holidays are given, so that the mill works only 300 days a year. It was admitted by the manager that, with the exception of 7 boys who really do seem to work only half a day, all the children work full-time, irrespective of their ages. A number of full-time throstle boys, who were obviously under 14 years of age, were seen at work. All hands are called every Sunday to clean machinery up to about 10 A.M. The rates of monthly wages are as follows:—half-time boys Rs. 2-8-0, full-time boys from Rs. 5 to Rs. 7; on piece-work, mule spinners earn from Rs. 20 to Rs. 24 a month, piecers about Rs. 15, weavers (one man to two looms) from Rs. 20 to Rs. 30; reelers, men, from Rs. 10 to Rs. 15 and women from Rs. 6 to Rs. 12. Fencing sufficient, except that there are no shuttle guards on the looms.

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200	*Cotton spinning.*—The mill employs 337 men, 37 women and 50 half-timers—a total of 424 hands on 14,000 spindles (ring and mule). The hours of work vary according to the season— From April to July ... 6 A.M. to 7 P.M. July and August ... 5-30 A.M. to 7-30 P.M. September ... 5-45 A.M. to 7-20 P.M. October and November... 6-40 A.M. to 9-0 P.M. December and January... 7-0 A.M. to 9-0 P.M. February and March ... 6-35 A.M. to 9-0 P.M. } With one hour's interval at noon, except in October—January when the interval is only 45 minutes. The longest day was $13\frac{3}{4}$, and the shortest $11\frac{1}{2}$, actual working hours. Work always begins by daylight. Until two months ago all the half-timers in this mill were worked full-time; since then, as the result of a prosecution instituted by Government, the half-timers have been divided into proper sets, and now work not more than 7 hours a day. Of the morning set of 25 half-timers 23 were examined; they all appeared to be over 9 years, and had been carefully certified for age, marks of identification being given in each case. They seemed a poor, thin lot, and certainly 2 were physically unfit. The physique of the adults was good; they are not local men, but come from the United Provinces, Rajputana, etc. Weighed 18 men, average 109 lbs.; of these 8 were natives of Oudh, 4 of Agra and 6 of Rajputana. A number of the workers were suffering from eye complaints. Only two youths of from 14 to 17 years were seen at work, so that a 'young person' class would not effect the working hours of this mill. Half-timers get Rs. 3 to Rs. 4 a month, full-time boys Rs. 5 to Rs. 7. A class piecers on mules earn Rs. 12 to Rs. 14 a month, B class piecers Rs. 8 to Rs. 10, minders Rs. 17 to Rs. 20, women (reeling) Rs. 5 to Rs. 10. There are about 80 rooms for mill hands in the compound, let out at a monthly rent of 10 annas a room. The latrines have 12 seats. Fencing and ventilation were satisfactory.
201	*Cotton ginning, rice and flour mills and ice making.*—The factory employs 40 permanent hands, and temporary hands according to the amount of work in progress. The usual working hours are from 6-30 A.M. to 6-30 P.M., with one hour's stoppage at noon, except for the ice making—which is carried on day and night with two shifts, each working 12 hours. Occasionally the cotton ginning and flour mills are worked day and night also, in which case double shifts of workmen are employed. All the hands are adult males, except the women employed on the cotton gins, who are paid $3\frac{1}{2}$ annas for day work, and 4 annas at night. There is no difficulty in getting hands.
202	*Carpet factory.*—The factory employs 600 men and boys, but is not under the Factory Act, because only hand-looms, and no steam or mechanical power, is used. Usually work is carried on by day-light only, but occasionally, to execute urgent orders, the men work at night. The workers are chiefly Kashmiris, and there are a number of small boys under 9 years at work. The head weaver on each loom contracts to do the work at so much *per* 100 stitches, and pays all the hands employed on the carpet. The boys earn from Rs. 6 to Rs. 10 a month and the head weavers are said to make up to Rs. 50 a month. The physique of both men and boys seemed to be poor; they are stated to be liable to consumption. The weaving sheds are open and well ventilated.
203	*Woollen mill.*—The mill employs about 1,000 men, 40 women and 60 children. Work commences at day-light, varying from 5-30 A.M. in summer to 7 A.M. in winter, and continues up to 6-30 P.M. in summer and 5-30 P.M. in winter, an interval of 2 hours at noon being given from May till September, and of one hour for the rest of the year. The actual working hours vary from $9\frac{1}{2}$ in winter to $11\frac{1}{2}$ in summer. Overtime up to 9 P.M. is occasionally worked in certain departments, generally in order to comply with urgent Government requirements, but the number of days on which overtime is worked in a year does not ordinarily exceed 45, and no women or children work overtime. Half-timers are said to work in forenoon and afternoon sets in the long days, but there is no division into A and B sets, and no separate registers are kept, so that it is impossible to say whether the law is observed. In the short days they are said to work all in one set from 8 A.M. to 4 P.M. only. It was admitted that a proportion of the children under 14 were at the time of inspection being employed for over 7 hours a day, owing to the scarcity of such labour, but this practice is now less marked than formerly, and a steady effect is being made to comply with the law. Twenty half-timers were examined, they were all over 9 years, and were in good condition. Fifteen of the smallest full-time boys were picked out and examined; 13 of them seemed to be under 14 years, and 4 of these were suffering from spleen or malarial anæmia. The general health and physique of the adults was very good, except for malaria and eye diseases. 62 men were weighed, average 118 lbs. The company has built 230 houses for its operatives, almost all are occupied and more are under construction. Many of the hands are local men coming from villages within a radius of 4 miles. Sunday is always given as a holiday, and the cleaning of machinery is done on

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	Saturday afternoon. The latrines have 36 seats, and there are 6 urinals, all very clean. The certification of children for age is done by the Civil Surgeon of Gurdaspore, resident 8 miles off; he comes to the mill for the purpose once every 6 months, and children coming in the interval are employed in anticipation of his examination. Ventilation and fencing very good.
204	*Cotton spinning.*—The mill employs 266 men, 33 women and 143 children—total 442 hands. It worked in January 1907 from 7-15 A.M. to 8 P.M.; in February from 7 A.M. to 8 P.M.; in March from 6-30 A.M. to 8 P.M.; in April from 5-50 A.M. to 7-10 P.M.; in May from 5-35 A.M. to 7-20 P.M.; in June and July from 5-10 A.M. to 7-30 P.M.; in August from 5-45 A.M. to 7-15 P.M.; in September from 6-10 A.M. to 6-30 P.M.; in October from 6-25 A.M. to 6-15 P.M.; in November from 6-40 A.M. to 8 P.M.; and in December from 7 A.M. to 8 P.M.—always with one hour's stoppage at noon. The manager admits that until 2 months ago all the children worked full time, irrespective of age, receiving from Rs. 4 to Rs. $6\frac{1}{2}$ a month. This fact having been brought to the notice of the authorities, and a prosecution being threatened, some attempt is apparently now being made to divide the children into sets and work them only half-time; but it is impossible to say how far the law is now being observed in this respect as the registers are incomplete. The manager states that as a result of his endeavour to comply with the law some of the children have left, and it is difficult to keep all the spindles going. Examined 86 children under 16 years; it was impossible to ascertain how many of them were actually working full-time and how many only half-time. Seventy-three of them were under 14 years of age, and 10 of these seemed to be under 9 years. The cases of these 10 boys were specially examined; 7 of them had been certified to be over 9 years, and 3 were not certified; they were being paid Rs. 4 or Rs. 5 a month each. The certificates give no marks of identification, though the form provides for such an entry; in some cases the father's name was not given. The adults were a strong-looking lot; the average of 11 men who were weighed was 108 lbs. Only about 5 per cent. of the hands are local men; the rest come from Oudh, Rájputána, etc. In the ginning factory attached to this mill a fatal accident occurred more than a year ago, a woman being caught by the unfenced line shaft and killed; in spite of this the line shaft has not yet been fenced.
205	*Cotton spinning.*—The mill employs 374 men, 60 women and 38 children—total 472 hands. The longest hours worked are, in March, sometimes from 6-15 A.M. to 9 P.M. with one hour's stoppage at noon—total $13\frac{3}{4}$ hours actual working. In the hot weather the mill stops at 7 P.M.; work is commenced by electric light in the winter mornings; and the average is 13 hours actual working a day. It was admitted that until recently all the boys under 14 years worked full-time; an attempt is now being made to divide them into sets, but probably most of them still work full-time. No proper registers are kept, and many young boys were seen escaping from the mill on the occasion of the Commission's visit. Here, too, hardly any local men come for employment; of 14 men picked out at random 1 came from Lahore, 3 from Jullunder and 10 from Oudh; their average weight was 113 lbs.
206	*Flour mill.*—The mill works ordinarily day and night, with 2 shifts of hands from 6 A.M. to 6 P.M., and from 6 P.M. to 6 A.M., the shifts changing every fortnight. There are 70 men in the milling department (35 in each shift) and they arrange among themselves for occasional intervals of rest. Besides, there are 70 men and 10 women engaged by day only in handling bags, cleaning grain, sweeping, etc. There is a stoppage for 24 hours on Sunday, during which the hands attend to clean machinery. Inside hands get from Rs. 8 to Rs. 15, outside coolies, who carry the bags, from Rs. 15 to Rs. 17 a month; very few local men are employed. The hands are steady in attendance and do not change as much as in cotton mills. Ventilation is extremely good, the dust being all removed by fans, etc. Fencing very good, and the general arrangements throughout the mill excellent.
207	*Oil and flour mills.*—The mill employs about 35 hands, and works usually from 7 A.M. to 6 P.M., with one hour's stoppage at noon. Occasionally work goes on till 9 P.M. to meet urgent demands. Daily wages of the hands range from 7 annas to one rupee. Machinery is cleaned on Sundays.
208	*Cotton and wool pressing.*—The press employs 27 hands, and works from 7 A.M. to 6 P.M.—never at night. The men earn from 7 to 9 annas a day. Women are employed on sorting the wool.
209	*Printing press.*—The press employs 140 hands—all adult males—and works $8\frac{1}{2}$ hours in the hot weather and $10\frac{1}{2}$ hours in the cold weather, exclusive of half an hour's interval at noon. Machinery was well fenced. The physique of the work-people was good. About 12 boys under 14 years are employed by contractors in folding papers; they are said to come at 9 and leave at 4 o'clock, and the manager claims that they are not under the Factory Act because they work in the building separated from the machinery, but in the same yard.